



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

L

106
1905
L67

A 434620

LEWIS AND CLARK CENTENNIAL EXPOSITION

PORTLAND, OREGON, JUNE TO OCTOBER, 1905

H. W. GOODE, President

H. E. REED, Secretary

PROGRAM, ORGANIZATION and ADDRESSES

Lewis and Clark Educational Congress



THE LEWIS & CLARK CENTENNIAL
PORTLAND - OREGON - 1905

AUG. 28 TO SEPT. 2, 1905

AUDITORIUM OF THE EXPOSITION

Portland, Oregon, U.S.A.

Do
1735
L7

LEWIS AND CLARK CENTENNIAL EXPOSITION

PORTLAND, OREGON, JUNE TO OCTOBER, 1905

H. W. GOODE, President

H. E. REED, Secretary

PROGRAM, ORGANIZATION AND ADDRESSES

Lewis and Clark Educational Congress

AUG. 28 TO SEPT. 2, 1905

AUDITORIUM OF THE EXPOSITION

Portland, Oregon, U.S. A.

Auspices Lewis and Clark Congresses Committee and a Committee of
Pacific Northwest Educators

LEWIS AND CLARK CENTENNIAL EXPOSITION

PORTLAND, OREGON, JUNE TO OCTOBER, 1905

H. W. GOODE, *President*

H. E. REED, *Secretary*

PROGRAM, ORGANIZATION AND ADDRESSES

Lewis and Clark Educational Congress

AUG. 28 TO SEPT. 2, 1905

AUDITORIUM OF THE EXPOSITION

Portland, Oregon, U.S.A.

Auspices Lewis and Clark Congresses Committee and a Committee of
Pacific Northwest Educators

Presses of
ANDERSON & DUNIWAY CO.
Portland, Oregon

LEWIS AND CLARK CENTENNIAL EXPOSITION

PORTLAND, OREGON, JUNE TO OCTOBER, 1905

H. W. GOODE, President

H. E. REED, Secretary

PROGRAM, ORGANIZATION AND ADDRESSES

Lewis and Clark Educational Congress

AUG. 28 TO SEPT. 2, 1905

AUDITORIUM OF THE EXPOSITION

Portland, Oregon, U.S.A.

*Amplified Lewis and Clark Congresses Committee and a Committee of
Pacific Northwest Educators*

Organization and Program

Lewis and Clark Congresses Committee—J. R. Wilson, Chairman ; W. G. Eliot, Jr., Secretary ; W. W. Cotton, W. L. Brewster, E. P. Hill, R. W. Montague, S. S. Wise.

Executive Committee of Educators—J. H. Ackerman, Chairman, State Superintendent of Oregon ; R. B. Bryan, State Superintendent of Washington ; Miss May L. Scott, State Superintendent of Idaho ; W. E. Harmon, State Superintendent of Montana ; W. N. Ferrin, D. A. Grout, J. C. Zinser.

Committee of Educators—P. L. Campbell, President of the State University ; W. N. Ferrin, President of Pacific University ; Frank Rigler, D. A. Grout, C. L. Starr, J. C. Zinser, J. H. Copeland, E. E. Bragg ; J. H. Ackerman, State Superintendent of Oregon ; R. B. Bryan, State Superintendent of Washington ; Miss May L. Scott, State Superintendent of Idaho ; and W. E. Harmon, State Superintendent of Montana.

Committee of County Superintendents—R. F. Robinson, Chairman ; M. C. Case, L. R. Alderman.

MAY 12 1944

Program

EDUCATIONAL CONGRESS.

Held in the Auditorium, mornings, from 9 to 12, August 28 to September 2.

Admission to this Congress was free through the street entrance, this admission not including admission to the Exposition Grounds.

Monday, August 28—

Administration Band.

Address of welcome: Honorable A. L. Mills, of the Executive Committee of the Exposition, on behalf of the Exposition.

Presiding Officer for the day: President W. N. Ferrin, of Pacific University.

Convocation address: Honorable William T. Harris, LL. D., United States Commissioner of Education, Washington, D. C.

Address: Honorable Andrew S. Draper, Commissioner of Education for the State of New York. Subject: "Unsettled Questions in the Organization and Administration of Schools."

Tuesday, August 29—

Vocal solo: Mrs. L. T. Chapman, of Pacific University.

Presiding Officer for the day: Mr. E. V. Littlefield, President of the Oregon State Teachers' Association.

Address: President Benjamin Ide Wheeler, of the University of California. Subject: "The Relation of the Pacific Coast to Education in the Orient."

Discussion: Professor J. R. Robertson, of Pacific University.

Address: Mr. F. Louis Soldan, City Superintendent of Schools, St. Louis, Missouri. Subject: "Education in a Democracy."

Tuesday Evening, eight o'clock, at the Auditorium—

Lecture by Mr. H. M. Leipziger, Supervisor of Lectures in the New York City Schools. Subject: "Adult Education and the Extension of the Schoolhouse."

Wednesday, August 30—

Presiding Officer for the day: President E. D. Ressler, State Normal School, Monmouth.

Address: Professor A. H. Yoder, Department of Pedagogics, State University of Washington. Subject: "Social Conditions and Elementary Education."

Discussion: Professor H. D. Sheldon, of the University of Oregon.

Address: Mr. H. M. Leipziger. Subject: "Manual Training."

Discussion: Mr. B. W. Johnson, Superintendent of Manual Training in the Seattle public schools.

In the evening a reception was tendered Honorable William T. Harris at the Oregon State Building by the Association of the Commissioners of state educational exhibits.

Thursday, August 31—

Mr. A. J. Church, City Superintendent of Public Schools for Baker City, Oregon, was the presiding officer for the day.

Address: Honorable J. H. Ackerman, State Superintendent of Public Instruction for Oregon. Subject: "The Problem of the Rural School."

Address: Mr. Frank Rigler, Superintendent of the Portland Public Schools. Subject: "The Problem of Classification."

Discussion: Honorable W. T. Harris.

Friday, September 1—

Mr. R. F. Robinson, County Superintendent for Multnomah County, presiding officer for the day.

General subject for the day: "Technical and Industrial Education."

Address: President E. A. Bryan, of the Washington State College, Pullman, Washington. Subject: "Higher Agricultural Education."

Address: Honorable Howard J. Rogers, Assistant Commissioner of Education for the State of New York. Subject: "Education in Reference to Our Future Industrial and Commercial Development."

Saturday, September 2—

President Thomas F. Kane, of the University of Washington, Seattle, Washington, presiding officer for the day.

General subject: "Colleges and Universities."

Address: President P. L. Campbell, University of Oregon, Eugene. Subject: "Education and the State."

Discussion: President S. B. L. Penrose, Whitman College, Walla Walla, Washington.

Address: Professor Samuel McCune Lindsay, Wharton School of Finance and Commerce, University of Pennsylvania. Subject: "Education for Efficiency and the Demands of Modern Business."

Concluding remarks: Honorable J. H. Ackerman.

CONVOCATION ADDRESS.

By W. T. HARRIS.

Fifty years ago enterprising people in Missouri conceived the idea of starting a railroad that should extend in time to the Pacific Ocean and connect this Western Coast line with the Mississippi Valley and the Atlantic Slope.

This was the latest form of the heart-hunger for a country of wealth and abundance—gold and precious stones, and a fabulous king every morning powdered with gold-dust so that he was the shining one, as the word *rajah* indicates to the people who speak Sanscrit. The land of realized wealth was called India, and was sought by adventurous travelers from Europe to the East. And a way by sea around Africa was explored long before Vasco di Gama doubled its southernmost cape, not long after Columbus had executed the bolder plan of circumnavigating the world by sailing westward. Almost every navigator who followed the example of Columbus tried to find not America, but a western passage through America to India, the ideal land of wealth. They did not know of the great wealth in gold offered by the mines of the west coast of America, and were not satisfied with Mexico and Peru, but wished to get to the India of Eastern Asia, whose story they had read.

Thomas H. Benton, Missouri's great statesman, standing in Lafayette Park in St. Louis recited his oration at the celebration of the beginning of the first railroad ambitious enough to call itself the Pacific Railroad, and for which the State of Missouri had contributed a large sum from its treasury. Pointing to the West along the line of the projected road, Benton said in his impressive manner: "There is the West, there is India."

Early in our civil war the Pacific Railroad was pushed through to completion, on the western line from Chicago and connected by a branch with the Missouri Pacific.

Little was it then thought that the Western Coast would itself be much richer than India has ever been, and that its commerce with the East would exceed the commerce of Europe with India. But surely there has come such a commerce to the East, and with it also a great commerce to Asia, six great trans-Pacific navigation lines already and a prospective increase to a trade that will rival the domestic commerce with the Eastern and Central States of this Republic.

Fifty years before Benton's famous address, Lewis and Clark had made the world-historical exploration of Oregon which you

celebrate this summer in this gorgeous exposition of the arts and industries of all nations.

Hence, too, this Educational Congress, happily conceived because it celebrates one of the permanent aspirations that had its origin in the heart-hunger that led the people of Europe out in search of the land of the Golden King—a search which finally led, on all hands north and south, not to kingdoms, but to democratic republics and to the local self-governments of America.

The Crusades, the age of discovery, and the era of colonization, all came from the desire for an opportunity for self-activity on the part of the people as people.

The realized nations of Europe were good and gave much opportunity, far more than had yet been realized by other parts of the world, but that was only a mere taste of freedom in thought and action, and there must arise on the distant borderlands such organized forms of opportunity as would satisfy the very ideal of free development on new lines—each man revealing his new thought by deeds. A mere taste of freedom led to full draughts of freedom.

Man escapes from the too great pressure of tradition and too servile obedience to the past by migrating to the borderland of opportunity where he can do for himself. If his ideals are wise ones and he has skill, he will reap a rich reward; if his ideals are unwise or his practical skill very small, he will reap poverty and all manner of misfortune. But in both cases his life will be a revelation of himself as an individual, and not a mere slavish execution of time-worn usages and modes of doing.

The field of opportunity aids us to free ourselves from the weight of the past. But that servitude of the past is only one kind of slavery. Present needs and necessities furnish another kind of slavery, and the past helps to free us from the thralldom of the present, and this is the lesson of our Congress of Education here today. Education helps man to understand the past and to bring it to the aid of the present. All its discoveries, all its bitter experiences, all its great successes, go to the aid of man through education. His self-activity becomes fortunate if he can profit by the observations and thoughts and inventions of his fellow men. Great as he may be in ambition and in the raw material of an individual career, he will not succeed except insofar as he reinforces his individual might by the aggregate might of civilization—except as he reinforces the present by the past.

Education has been and is the chosen instrument of success, for it can in the deftest manner give the new individual the knowledge of the progress of mankind in the conquest of nature by science and art, and the method of organizing people into free institutions by which they mutually reinforce one another.

Education changes the past from a tyrant to a friendly auxiliary—from an oppressive burden of blind customs to an illuminating theory which all may see, each for himself.

Therefore it is that with the successful transplanting of civilization into the Western Continent the school has been found necessary for success. Opportunity is lost to the person who cannot command knowledge and skill and who cannot combine with his fellow men.

Education gives man freedom, because it gives him insight—the ability to see and understand for himself both the past and the present, so that he can use them to build with.

In the light of this movement of civilization towards the borderlands, and in the presence of this great exposition of resources and production, let us look at the work before this Congress which is laid out in the program of the five days coming, and briefly recapitulate some of its most important topics.

The pupils and the work in the different grades are shown in the general exhibits of the Exposition.

The discussions of this Congress will relate to the special interests of the schools today which center in such problems as:

1. The substitution of the well-graded school for the rural ungraded school that exists in the sparsely settled districts. It is in process of being supplanted by the graded schools through the new device of transportation to the central school of the village.

2. The makeshift teacher is being replaced by the professionally trained teacher, who is a graduate of the normal school.

3. The professional teacher has salaries above him reaching to \$10,000 or more as the summit—the rank and file find it easy to get \$600 and can, in fact, almost start with it. High school positions open 1,300 new ones a year, and 25,000 already reached—colleges and universities 1,000 new ones a year, and more than 20,000 positions exist already. Superintendents of city systems, 1,000 of them in cities of over 8,000 population, and about 1,500 of them in all. New cities are growing out of villages from year to year.

4. Transportation of pupils to village centers from the rural sparsely settled districts is in process of eliminating on a large scale the old ungraded school and installing the professional teacher in place of the makeshift teacher who comes in as a volunteer for a three months' service.

Once begun, the transportation of pupils from ungraded schools to urban-graded schools will go on more and more rapidly, affording thousands of new positions annually for professional teachers, such as are trained in the normal schools.

The normal schools graduate 8,000 pupils a year, and within fourteen years have graduated 113,000, most of whom are now

teaching in graded elementary schools, high schools, and in college work, at annual salaries sufficient to furnish a respectable living.

5. Transportation of pupils solves the problem of the rural school. The growth of villages increases the number of ten-month schools. Railroads create centers of urban life, and communities that read the daily newspaper. The significance of graded schools is found in the time gained for recitation, for the cultivation of critical alertness, and for teaching how to study. The ungraded school had for its method individual instruction, and not class instruction, which becomes a powerful instrument in graded schools.

A population that remains in an old settled country—in its “fatherland”—grows up in the grooves long ago fitted for it, and is not given to new initiatives or to the development of originality. “Opportunity” is not found there in its most stimulating forms.

Columbus discovered America, and an age of opportunity arose for all Europe for a period of 200 years—first an age of exploration, which was followed by an age of colonization.

What in history is spread out over centuries and “written large on the blackboard of the universe,” so that even the slow-minded may see it, gets realized, by and by, in each man’s life in after ages, and now every family in the old centers of civilization—New York, Philadelphia, Boston—sends its sons out to serve a business apprenticeship in the borderlands—Chicago, San Francisco, and Portland. Even London, Paris and Berlin send their sons to Australia, Madagascar, or the Argentine Republic. This age of opportunity which in history was once spread out over 300 years of Crusades, 200 years of discovery and colonization of the New World—five centuries in all—is now taken up into the culture of every family, and is lived through within the compass of a single life.

In a newspaper age, people have learned to watch from day to day the world-history unrolling on the wheel of time, reading its pages from day to day as they are lived and written. Thus the epic element enters human life in its everyday tasks, turning its prose into epic poetry.

It is perhaps the greatest function of the common school that it fits out its pupils with an ability to read, and a habit of reading. Reading involves the capacity to recognize, by sight, words that existed before the school age only as sounds addressed to the ear. The school makes the child eye-minded. He was only ear-minded before. He knew words only by ear, now he begins to know them by the eye. As ear-minded, he learned chiefly by hearsay, now, become eye-minded, he learns by the printed page, and like Heimdall, the gate-keeper of the Gods in the old Norse

mythology, he can hear all the movements in the wide universe—he can hear the trees grow, yes, even the wool growing on the backs of sheep, the whisperings of the people in China, and India, in Russia and Japan. But the gift of hearing elevated to a high potency is not equal to this gift of eye-mindedness which can stop the rolling wheel of time and fix on its printed page the fleeting moment so that it is made permanent and can be recalled at pleasure from the past, or summoned hither from any remote distance. Eye-mindedness and not ear-mindedness can go beyond the colloquial vocabulary and master the technical vocabulary in which science can express with unmistakable accuracy its observations, its experiments, and its reasonings.

Let us consider some of these topics more in detail:

The preparation of the teacher for his vocation is always a central problem in school management.

In 1880 there were 240 normal students in each million of inhabitants; in 1897 there were 936 in each million.

The normal school, it may be said, has the general effect of making its pupils observant of methods.

The ordinary persons sees results, but does not take note of the methods by which they are produced. Hence the teacher who has never received instruction in a normal school may happen to be a good teacher, but it is quite unusual for him to understand how he secures his own results; and he is not often able to profit by seeing the work of other good teachers, for he cannot readily see what method they use, not having acquired the habit of looking at methods. On the other hand, the normal school graduate seldom visits a successful school without carrying away some new idea, or at least, some new device of method. Hence normal school graduates continue to grow in professional skill for ten, twenty, or even thirty years, while it is said truly that the teachers not from normal schools usually reach their maximum skill in from three to five years. After that period degeneration is apt to set in because of the fixation of methods in ruts—a mechanical habit grows on the teacher who does not readily see how his mannerisms look to other people.

Teaching as a makeshift occupation, such as we find it in rural schools, with three or four months' annual session, can never be of sufficient importance to cause young men and women to spend years at training schools in preparation for that work. Only places with annual salaries and with eight or ten months of teaching will warrant the establishment of normal schools, and the three years' course of preparation necessary to secure the qualification needed for the professional teacher.

In order that we may provide good teachers there must be adequate salaries, and there must be annual salaries, and not

monthly salaries such as are found in schools that have sessions of only three or four months.

I am therefore glad to mention here that the average annual increase in higher education throws open nearly 1,000 new places a year in colleges and universities for teachers promoted from the secondary schools on being found to have the requisite skill and scholarship. There were in 1890, 7,918 professors and instructors in the colleges and universities of the United States, not counting the professional schools. In 1903 the number had risen to 20,887. It started with less than 8,000 and had an increase of new places in thirteen years almost equal to 1,000 a year—12,969. The secondary schools of the United States counted 16,329 teachers in 1890, and in 1903 counted 33,795. This increase gave 17,466 new positions in thirteen years for teachers in public and private high schools.

Besides these positions in colleges which are for a year of eight or nine months, and offer good salaries, the teacher's profession offers in the elementary and high schools and in the office of superintendent the following positions, reported from 467 cities of over 8,000 population, to the special committee of which Col. C. D. Wright was chairman:

Salaries.	Position.
\$ 600 to \$ 700	16,015
700 to 800	11,064
800 to 900	8,664
900 to 1,000	4,424
1,000 to 1,100	2,539
1,100 to 1,200	1,486
1,200 to 1,300	2,825
1,300 to 1,400	1,166
1,400 to 1,500	861
1,500 to 1,600	766
1,600 to 1,700	1,005
1,700 to 1,800	227
1,800 to 1,900	361
1,900 to 2,000	233
2,000 and over	1,918
Total	53,554
\$500 to \$600	14,193
Under \$500	17,728

Adding the positions in colleges and universities, 20,887, to 53,554 positions with salaries of \$600 and above, we have a total of 74,441.

It will be seen on inspection of the above table that there are 26,475 positions that pay \$800 and upwards, which with the college positions make 47,362.

Consolidation of Schools and Transportation of Pupils.

The practice of consolidating two or more small schools and transporting the more distant pupils of the discontinued schools

to the central (usually graded) school at the public expense has been resorted to, either under specific provisions or under the general authority of the law, in the following states: California, Colorado, Connecticut, Florida, Georgia, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Montana (1903), Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, Virginia (1903), Washington, Wisconsin, and Oregon (1903), twenty-seven states in all.

Notable movements toward the consolidation of schools, but without the feature of transportation, have been recently inaugurated in North Carolina and Missouri. Some progress in the same direction has also been made in Louisiana.

Consolidate rural schools by free transportation and provide for their instruction in graded schools with annual sessions of ten months, taught by teachers who have professional skill and who know how to make the class an instrument for the instruction of each individual pupil in the class.

Can a rural school with a good teacher be a good school? It will find in its ten, twenty, or thirty pupils all grades of advancement, from the beginners at five years to those who have had seven or eight years of schooling, and attained the age of sixteen years or more. These pupils cannot be taught in classes to any great extent; there must be many recitations, and consequently short ones. Let there be good teachers, and they will certainly accomplish more than poor ones. But what can a good teacher do in a five-minute recitation? One of the accomplishments of a trained teacher is his ability to probe the pupil's understanding of the lesson and set him thinking about the relations of what he has just learned to what he has learned at a former time, either at school by study, or by experience, in the events of his life. But even the skilled teacher cannot, in a five-minute recitation, probe the pupil's knowledge of the lesson, and connect it with all its threads of relation. He cannot teach the pupil habits of deeper thinking. Moreover, the pupil, if he recites by himself, or in a class of two or three, does not gain the great advantages that come from reciting in a class of twenty pupils substantially equal in ability. For each pupil in a class learns as much from his fellow-pupils as from the teacher direct. He can see the one-sidedness of the recitations of his fellows. They have learned some things that escaped his attention, but have neglected others that he has learned well. There is too great a disparity between the pupil's view of a subject and the teacher's view to make a thorough mutual understanding possible, except through the mediation of the class. Each pupil learns more from the teacher's criticism of the work of the other pupils than from the criticism of his own work.

Every recitation reveals to the pupils of the class many points of view that they had missed in the preparation of their lessons; some have missed this point and some that point. They learn also to criticise the text-book and overcome their superstitious reverence for what they find printed in books.

The Growth of High Schools and Colleges.

Before considering our next theme, "The Growth of High Schools and Colleges," I ask your attention to a definition of civilization.

What right, it is asked, has one nation to impose its form on another by force, on the ground that its own is a higher form of civilization? What infallible criterion have we, asks another, by which we may be entitled to conclude that we have a higher civilization than the neighboring nations? Why is not the Indian civilization as good as ours? Why is not the Chinese civilization, or the civilization of the Philippine Islands, as good as the civilization that calls itself the United States, or Great Britain, or France, or Germany? This is a serious question and needs to be understood if one is going to sit in judgment upon national conduct.

I ask you, therefore, to consider with me the answer which can be made to the question, "What is it that makes one civilization higher than another? What is a high civilization, and what is the highest civilization?"

I offer a definition for civilization. It is this: A people is civilized when it has formed institutions for itself which enable each individual citizen to profit by the industry of all his fellow-citizens; when it enables each individual to profit by the experience and wisdom, the observations and the thoughts of his fellow-citizens; when it encourages each individual to enter upon a rational self-activity by which he contributes, either through his industry or through his observations and his thoughts, to the benefit of the people with whom he lives.

This definition of civilization can be put in another form which shows its significance. Civilization enables man to conquer nature and make it his servant; to command the services of heat, light, electricity, and of all the inorganic elements; to command also the plant world or vegetation, for his uses; to command also the animal kingdom for the same service; in short, to command the services of nature for food, clothing, and shelter. Besides this control over nature, civilization should give man access to the history of his race; access to its literature; access to its scientific discoveries; access to its various inventions; and, above all, access to its moral and religious ideals. Civilization, in short, should give man command of the earth, and likewise command of the experience of the entire race.

In the light of this definition we may approach the civilizations as they actually exist and inquire how far they have realized the ideal, how high they have climbed on the ladder of civilization. At once we see how low the tribal civilization is as compared with the civilization of Great Britain, or France, or Germany. There is no tribal civilization on the face of the earth, and never was one, which could compare with these nations in its knowledge of the uses of mineral substances, chemical transformations, and the natural forces such as heat, light, electricity, gravitation, etc. No tribe can possibly command the complete resources of the world as regards its vegetable and its animal life, the products of agriculture and the mines. The reason for this is that the tribe is too small, and the tribe from the very nature of its constitution can not co-operate with other tribes nor receive their help. It stops at a view of nature which is a mere superstition. The tribe can climb only a little way up the ladder which leads to the control and command of all the substances and forces of nature. Consequently the tribe can not participate to any great degree either in the productive industry of the whole world or in its intellectual investigations and discoveries.

Other forms of civilization above the tribe take rank as higher or lower, according to the degree in which they realize this ideal of conquest over nature and complete intercommunication with the rest of the world. No nation that lacks a great commerce can be so high in civilization as Great Britain or France. No nation that lacks railroad communication can be so high in civilization as the United States. No nation that lacks steam engines to perform its drudgery can be so high as the nation which has these things.

Again, a nation that has no printing presses and that can not buy or read the books of the world can not be said to have a high civilization. And on this scale the nation that has the most printing, that makes the most books, and that reads the great books of the world is higher than the other nations. The ideal in this respect is that civilization should make it possible for each man to know the experience of all the past through science and literature, and that he should be able to see, through the columns of a morning newspaper, the history as it is making, day by day, in all the lands of the world.

Again, there is another criterion—a very important one. A nation may be very far advanced in its ability to control nature and to command access to the wisdom of the race; but it may do this only for some classes of its citizens and not for all. Such a nation is not so highly advanced in its civilization as one that allows each of its citizens to participate in the product of the whole. The nation that gives schools to the humblest classes of its people as well as to its highest classes, and the nation which

allows the humblest people to govern themselves under just laws, is a higher nation than one which separates the ruling class into a government apart from and above the mass of the people.

The highest ideal of a civilization is that of a civilization which is engaged constantly in elevating lower classes of people into participation of all that is good and reasonable, and perpetually increasing at the same time their self-activity.

High schools and colleges teach the grounds of our civilization; the elementary schools provide the first rudiments. We often hear people ask whether a high school course of study is really practical, or only ornamental. Let us pause a moment to consider. There were 292,287 pupils in the United States public high schools, and 54,726 in private high schools, studying algebra, in 1900.

Algebra is a difficult study, but it gives an insight into the construction of arithmetic. If a person in later life should forget his arithmetic he may readily reconstruct its rules, if he has studied algebra at some time in his youth for a year. He can perform far more difficult problems by its method than he ever could perform by simple arithmetic. No advanced course of study in mathematics can be pursued except by aid of algebra.

Besides these students in algebra, there were 168,518 youth in high schools studying geometry. This branch shows the necessary structure of all bodies that exist in space. Algebra and geometry are tools of thought that enable man to control matter and motion. They are among the most practical of all branches for giving directive power.

My attention was called to this practical phase of high school mathematics as applied to physics thirty years ago, when one of our high school boys in St. Louis, Mo., took a humble position in the water works office of that city. Some pipes in the lower part of the city, next to the river, burst, and the new ones by which they were replaced did not last long. This boy made a calculation, and found that the pressure of 150 feet of water is something like sixty pounds to the square inch, and that this was more than the regulation pipe used could stand, and, on request of the manager, he made a formula by which the proper regulation standard of pipes could be fixed. This boy was promoted.

Physics, or "natural philosophy," enrolling 118,936 pupils, describes and explains mathematically the various properties of matter and force, showing the structure of all kinds of machinery and giving an insight into electricity, steam, attraction of gravitation, the dynamics of water, the nature of the solar spectrum, the structure of the telescope, the microscope, and the like.

Of all branches that have to do with the conquest of nature, by human industry, physics is the most important for the pupil.

In the languages, 65,684 pupils in high schools were studying French, 100,873 pupils studying German, 24,869 Greek, and 314,856 were studying Latin. Latin is the stock out of which the southern languages of Europe are formed. Even the northern languages get the most important part of their vocabularies from it, namely, the technical words for the sciences and the words expressing fine shades of thought and refined emotions. Even a brief study of Latin, say six months, is of immense value to enable one to be at home in the English language, of which three-fourths of the vocabulary is of Latin origin.

Besides these language studies which deal with a knowledge of human nature, the high school gives other studies that help powerfully in the same direction: 238,134 pupils in high schools studied general history last year.

This is an age of the conquest of nature by machinery. One hears gladly the strong speeches made by progressive men in favor of manual and industrial training—there ought to be free industrial schools enough to enable each youth to learn the trade of his choice without resorting to the tedious and wasteful process of apprenticeship. In the past thirteen years manual training has been provided for in 322 cities out of the 587 cities of over 8,000 inhabitants, and there are 33,062 pupils enrolled in manual training high schools. A little more than 5 per cent of all high school pupils in the United States are studying manual training. It ought to be possible for any middle-aged man or woman to attend an evening school or a day school and learn a new trade in a few weeks or months—or, what is of quite as much importance to them, learn how to improve themselves in the trades they have been following for twenty years without acquiring any considerable skill because of having no opportunity to learn the most approved new methods and manipulations. All this is true, but it remains a fact that the pupils who have well learned the common school branches are far better fitted to use machinery than the illiterate laborers who have served their long apprenticeships of seven or even of twenty-seven years.

The growth of high schools and colleges in the United States has been something enormous in the past thirty years. I quote here the comparison of 1890 with 1900. If we add the totals of higher education to those of secondary schools, in order to see what the country as a whole is doing in schools beyond the elementary grade, we find that in 1890 there were 8,053 students in the million of population, who were pursuing advanced studies, and that these 8,053 had increased in the decade to 12,588.

ENROLLMENT OF SECONDARY PUPILS.

Ninth to twelfth year of course of study in the United States.

	1890.	1900.	In each million population.	
			1890.	1900.
Private academies	94,931	110,727	1,576	1,443
Public high schools.....	203,000	520,000	3,241	6,832
Preparatory classes and special institutions....	69,109	89,193	1,115	1,174
Total secondary pupils	367,040	719,920	5,872	9,449

TOTAL HIGHER EDUCATION IN THE UNITED STATES.

	1890.	1900.	In each million population.	
			1890.	1900.
Colleges			800	1,284
Other higher education, professional and technical			1,301	1,855
Total higher			2,181	3,139
Grand total secondary and higher			8,053	12,588

The significance of these educational items cannot be fully appreciated without considering the facts that I have hinted already, namely, that the school gives the power to continue one's education with increasing skill throughout life. Even the illiterate grows, although slowly, in mental power by reason of his experience in life. But his experience is limited to what he can observe in himself and in a small circle of neighbors. But his school-educated companion who can read and does read, is all the time widening his mental view by what he gets from the printed page, and growing in accuracy of thought on account of it. Hence it happens, after fifty years of life, at the age of sixty years, the illiterate has grown as much by experience as he could grow by one year of schooling, while his literate companion has grown at least ten times as much.

So with the secondary pupil there are opened new windows out of which to observe man and nature—the windows of algebra and geometry, of physics and chemistry, of Latin and French or German, and of general history. He gets at least three times as much from the printed page of science or literature as the graduate of the elementary school, and his accumulation in the

course of fifty years is more than ten times that of his elementary companion, or 100 times that of the illiterate.

In one year's time the high school graduate has not made very many applications of his knowledge, but as the years go on he starts new trends of observation, and follows out threads of causation and long paths of genesis in the growth of the things and events that come under his immediate observation.

The student of higher education far surpasses the secondary student in his ability to see lines of causality and of genesis in facts and events, and his power to accumulate in his life experience from year to year is far greater. His power to see the past in the present and to predict the future at a glance of the present situation seems miraculous, after fifty years of using his higher education. Just as Agassiz could see in the scale of a fish enough of its character to enable him to draw the fish, although he had not yet seen the fish, and just as Asa Gray could divine the history of a tree from seeing it at a single glance, so in a thousand ways and in a thousand different provinces the old man who in youth has been trained in the college and in the professional school acquires powers of seeing things in their history and in their complex of relations.

These are the considerations that make us rejoice at the recent unexampled increase of secondary and higher education, and it remains for us to say that this increase is likely to go on, because it is due to the growth of productive industry in the country. The use of water, steam, and electricity in the industries is increasing the average annual production of each inhabitant. This accumulation of wealth enables our people to prepare their children in better schools and in longer periods of schooling.

The average school term of the United States is only five years of 200 days each, or 1,000 days. The future will see this lengthened with the increase of wealth in the community. I do not think that the average production of wealth in 1800 could have been more than 10 cents a day for each man, woman, and child, but by 1850 it had risen to 30 cents a day, and in 1880 to 44 cents; in 1890 to 52 cents; in 1900 to 58 cents. The average amount of schooling will increase to ten years and more when, at some time in the future, we can produce a dollar a day for each inhabitant.

The great work of the elementary schools impresses us when we consider its function in the industrial and political life of our nation. It makes public opinion possible. Instead of ninety-nine drudges producing raw material and one person working to furnish and diffuse directive intelligence, it will come to pass some time in the future that one man will, by the aid of machinery, furnish the raw material, another man's labor will make the useful articles of food, clothing, and shelter; ten more will elaborate

articles of comfort and luxury; the rest, more than 80 per cent of the community, will take up vocations having to do with protection and culture.

The work of education is the direct work of helping individuals to help themselves. It does not go on as fast as it should, nor as far as it should. Our comfort is that it is making visible progress. The average complete school life for the entire nation is at present only 1,034 days for each person. This would give five years—each year of 200 days—enough to take a pupil through the primary schools of a city. Even Massachusetts, with all its schools, public and private, does not give enough schooling to amount to seven years apiece for its inhabitants. Some states of the union give only a little more than two years for an average. But it is worthy of note that Massachusetts, with nearly twice the average schooling per individual, produces nearly or quite twice the amount of wealth per individual, compared with the nation's average. In 1880 the census seemed to show that the average production of the whole nation was 40 cents per day for each inhabitant. That of Massachusetts came up to 80 cents.

It is in view of the fact that the laborers who produce raw material are paid only one-half of the wages paid to those engaged in skilled industries, such as are carried on in cities, that we find the significance of this great exposition in the City of Portland.

The symbols of the highest civilization are the railroad, the daily newspaper, and the school. Here we find the type of the bearer of civilization. It brings together the producer and the consumer. In the city the raw material brings the highest price, and the manufactured product is found at its cheapest price.

The city makes combinations; it seeks out the producer and buys his product, selling him its equivalent of the merchandise of the world. The city thus connects the people of its environment with the world. The family that produces for itself its own food, clothing, and shelter is living on a low plane of civilization. It should produce some specialty for the market of the world, and exchange it for a share in all the productions of mankind. Each person consumes or partakes of the product of the world of universal human society; each, himself, contributes to the supply of all others. It is this process of intercommunication of each with all that is the essence of civilization.

The family that produces all that it consumes does not enjoy luxury nor culture as the result of its labor. But when it has access to the market of the world through the mediation of the city, then it may have endless variety in what it consumes. By the division of labor, skill and productive power are increased, so that the share of each person is multiplied. Hence, each gets more than he gives to the world market.

Here we may see the vast significance of the school education in enabling the citizen who shares in the productions of his fellowmen to know his fellows, and understand their views of the world. It enables him to know their opinions, and to share in their spiritual productions as well as in their material productions. It enables him to participate in the formation of national and international public opinion.

Small as is the schooling given by our nation to its people, some four and one-half years apiece, it suffices to make reading and writing universal, and with them gives also a limited acquaintance with the rudiments of arithmetic and geography. This fits the citizen to become a reader of the daily newspaper, and thus to bring him under an educating influence that will continue throughout his life. A newspaper civilization is one that governs by means of public opinion. The newspaper creates public opinion. No great free nation is possible except in a newspaper civilization. By aid of the printed page, the school-educated person makes present to himself daily the events of the world and lives an epic life. For the epic life is the life of nations. A certain portion of the day of each citizen is given to contemplating world events, and to discussing them. He sees the doings of his state and nation, and forms his own opinion. His opinion, in the aggregate with those of his fellow citizens, is collected and offered to the world by the newspaper. That our schools suffice to produce a government by public opinion—this is a result of a higher order than the other good results which we have canvassed. To give people the power to readjust their vocations, and to climb up to better paid and more useful industries out of lives of drudgery, is a great thing, a sufficient reason in itself for establishing a public school system. But to give the people the power of participating in each other's thoughts—to give each one the power to contribute his influence to the formation of a national public opinion—is a far greater good; for it looks forward to the millennium, when no wars will be needed for the mediation of hostile ideas.

UNSETTLED QUESTIONS IN THE ORGANIZATION
AND ADMINISTRATION OF THE SCHOOLS.

By ANDREW S. DRAPER.

There are certain fundamentals of the American educational system which, it may well be said, are settled. They are settled by common thinking and universal acceptance; by legislative sanction and judicial determination. They are looked upon as the necessary basis of our political system; as the essential support, guardian, and guide of a democratic form of government.

For example: It is settled that our schools are to be free. They are to be supported at the common cost. All property is to contribute its share. They are to be open to all. There is to be nothing about them to which any may justly object on conscientious grounds. They are to be managed and their particular character and accommodations determined and provided by the people in primary assemblages or by officers chosen by the people. It is accepted that they are subject to the legislative power in each state because they are supported by taxation, and the power of taxation is a sovereign power which can be exercised only by the legislature. The legislative power which levies taxes must account for the manner in which the revenues are used. This logically results in very considerable legislative control and direction over the schools, but the local interest in the schools is so great and so jealous of prerogative that the legislative powers go only to general and vital matters, while the real organizing, housing, and administration of the schools is, and is likely to remain, local. It is settled that the power of the state shall undertake to assure a suitable school within accessible distance of every home and that each local community shall elaborate and embellish its particular school as far as the majority rule will authorize or permit. It is settled that there shall be a free high school in every considerable town and a free university in every state unless an endowed university is already upon the ground and in some measure meets the public needs. It is settled that all grades of schools shall articulate together with some exactness; that instruction shall be continuous from the primary school to the graduate school in the university, and that all pupils shall be encouraged to go as far and as high as they will. It is fundamental, though it has not always been so, that girls shall have the same rights as boys in the schools. It is settled that the legislature may provide for training teachers, and establish the methods, the standards, and the authority for determining their qualifications; may also go as far as it pleases in appropriating moneys directly to the support of the schools or in fixing the sums which localities must raise, ab-

solutely or conditionally; and may go further and create such supervising officers and such machinery for promoting effective teaching as it pleases.

The vital American principle that there shall be no organic or financial relation between the state and any church, between a school supported in whole or in part by taxation and any sectarian interest, has a decisive bearing upon the affairs of the public schools. The state will encourage every movement or enterprise which promises to be of advantage to any factor in the population by giving its sanction and approval thereto, but it will not enter into any business or moneyed relation with any class or faction as against any other, and it will not divest itself of any part of its power and function to deal with all sectional, class, religious, or partisan interests with exact and impartial justice. Accordingly, the public schools are common to all, must avoid all entanglements, and, in the fullest practicable measure, must be of equal advantage to all.

It is not possible, nor desirable, to enumerate all of the foundation principles of the common school system. They are easily traceable to the essential principles of our federal and state constitutions, to the settled doctrines of the common law and to the uncontroverted usages which have grown up in the thought and the public life of this country. Wherever the developing educational system comes in contact with these headlands of our political theory and our system of jurisprudence it will be well to understand at once that the educational system will have to adjust itself to them. These fundamental principles are well "settled," and, so far as the features and phases of the school system relate to such principles, they will have to be considered "settled" also.

Aside from this, nothing is settled beyond recall and nothing has gone beyond the possibility of change. Indeed, the adaptability and effectiveness of the schools depend upon unceasing modifications which are in keeping with the new conditions which are constantly arising, the new educational experiences which continually crowd upon us, and the new purposes and outlooks which are every day opening up to us.

We can not too often point out that our educational progress is measured by the freedom and confidence with which we do things, provided we keep sane, have proper respect for what our predecessors have done, and do not make changes for our own diversion or for the mere sake of a change. Men who would make a minor position in the school system the means of attracting attention or gaining notoriety, men who can destroy and not construct, men who are more ambitious than useful, often make trouble by supporting all sorts of changes in the schools. That is one of the difficulties with which a democracy has to contend.

But that is only a difficulty in administration, and not a real question in constructive or administrative policy. Happily, the school system has gone beyond the point where such men can do it much harm. They are powerless to do much good or harm. Any real problem in the organization and administration of the schools will have to be met by experts in education—men and women who know the history and have studied the philosophy of education, who realize the under-running currents of American life, and are desirous of shaping the schools to the purposes of a nation which is bound to give every one his chance and whose public policies and educational instrumentalities must aid and encourage every child of the republic to make the most of his chance. Such men and women need not fear to take the initiative in meeting any new questions which may arise in the school system, or to make any changes which, after discussion, are supported by anything like a consensus of opinion. The life and virility of the educational system depend upon their doing so.

I am to suggest—but must leave it to you to settle, if they are to be at once settled—some of the problems which now seem to confront the American school system. Presenting them with sufficient detail to disclose their reality, I shall not feel called upon to sustain one view or another with arguments, or even to indicate any opinion of my own concerning their solution.

It is an open question how much initiative and control shall be exerted by the state and how much shall be left to the locality concerning the schools. Of course, since the public school system has come to be supported by taxation and the power of taxation can not be exercised except by the sovereign authority of a state, there is no question about the state having ample power to do what it will about the schools. But there is very serious question about the measure of direction which the state ought to impose. People learn to do by doing. An officer bearing the appointment and exercising the authority of the state may know more about educational organization and administration than a local school meeting or local official may be expected to know, or, knowing, may be able to do. He may do things better than they will be done without him. Yet, if he initiates and supervises everything, the people will come to depend upon him, and will invariably look to the state to do what would broaden and strengthen them if they would do for themselves. On the other hand, people need educational intrusion from the outside. It often happens that a community thinks that it has the very best schools, when it has almost the worst. The difficulty is that it can not see, and of course it can not do. How are state control and local self-initiative and administration to be balanced with the best results?

Very akin to this question is another, as to the measure of money which the state should provide for the support of the

schools, and the amount which should be left to each city, town, or district to supply. In many states the support of the schools is left altogether to the locality. In others a very considerable sum is distributed annually on some basis which requires the stronger sections to aid in some measure the weaker ones, and so equalize educational advantages over the state. The City of New York, for example, pays annually about a million and a quarter of dollars to aid other sections of the state which are financially weaker. Of the legal competency of the legislature to exact this there can be no question. Of the substantial aid to the rural districts of the state there is no doubt. But people are never satisfied with the amount of money which they get for nothing. The more they get the more they demand, the more they come to depend upon it, and the less they will be willing to raise for themselves. It is clear enough to me that in education the stronger and wealthier sections of a state ought to help the weaker and poorer ones. But, in justice to themselves, the weaker ones should not be allowed to take all they will. How are the state and the local support to be adjusted so as to assure the best schools in every section and promote the highest interests of an entire commonwealth?

Again, if the state is to raise and distribute funds for the support of local schools, how is the distribution to be adjusted as between the primary, secondary, and higher schools? There are some precious souls who, if they are in favor of anything educationally, think they are for the "three R's" exclusively, or, at most, they are for anything beyond the "three R's" only when the need of their being for it has wholly passed away. Yet we know very well that a mere ability to read and write and cipher does not sustain intellectual life and democratic institutions anywhere in this country now; and we know quite as well that the excellence of the primary schools is dependent upon the prevalence and efficiency of the secondary schools. Schools are of little worth without schools above them; thus it is to the very limits of knowledge and of teaching power. But the secondary schools are more costly than the elementary schools, and the higher are more expensive than the secondary. How is the state to use its power so as to balance the school system, assure an equitable distribution of the different grades and so secure the best results which wisdom can devise?

Yet again, how is the teaching force to be made the best possible? There are more who want to teach than there are places. The pay is not large, but the work allows considerable leisure and satisfies pride. The unprepared ones are to be shut out. But who are prepared and who are unprepared? Some who know less that is found in books than others do are better teachers than the others are. Surely some who are not very

questions as the following are surely not impertinent in this connection :

Are we altogether certain that a large school is better than a small one, or a graded than an ungraded one? Is not the essential difference in the teaching and in the supervision, and may not efficient instruction be assured in the small country district, by a course less open to objection?

Is it, considering the exigencies of carriage and of weather, well to require young children to go farther from home than is imperative?

Is it better to centralize and complicate administrative machinery, with the necessary delegation of the authority for maintaining the schools from the people in primary assemblages to their representatives and officials, or to keep control as close to the people as possible and in the simplest forms compatible with efficiency? May not the district schools be expected to meet the circumstances and the elementary needs of its immediate constituency very well indeed, and is not the matter of maintaining the school house and of providing for the modest expenses of the schools likely to keep the people more interested in the schools than they will naturally be if the school is more remote and the measure of their control is lessened? Can not any real difficulty be met by continuing elementary schools as heretofore and by supplementing them by central high schools? Is it not better to continue the unit of district school administration as it prevails over large areas of the country, as far at least as local control over the location and the character of the building and providing for expenses are concerned, and by making a different unit for supervisory purposes which may be large enough to get a strong enough superintendent and yet not so large in miles as to make real supervision impracticable? Is not the real difficulty in the country politics and the size of the supervisory district and lack of professional control over the teacher and the teaching, rather than in the size of the school district? Is the location of an elementary school within the smallest practicable distance from every home, and the possession of a popular meeting place by the smallest hamlets and the cross-roads regions to be surrendered without the most imperative necessity or until it is clearly proved that the change of plan does not involve greater difficulties than any which are now pending? These interrogations do not necessarily negative the policy of consolidation, but it seems to me that they are sufficient to suggest that it is very much within the zone of unsettled questions.

There is at all times a sufficient supply of unsettled questions concerning the development of a uniformly virile teaching service, both in city and country. It must be said that teaching does not attract the large number of forceful characters. The

compensation is insufficient and the opportunities for distinction are held to be lacking. Men have very generally ceased to prepare themselves for teaching, and the same is largely true of the more ambitious women. No one can question that the best interests of the teaching service claim as much of the masculine as of the feminine mind, beyond the primary schools at least. No one can doubt the need of the most aspiring women in the schools. Any great work among large numbers of both sexes requires the co-operative help of both men and women and of the strongest and most expectant men and women in the world. The ordinary conditions of the teaching service do not make for this. And there has been in recent years a remarkable educational development which, indirectly but strongly, opposes it. That is the expansion of the colleges and universities so as to prepare for all of the professions, and the multiplying of vocations for educated and aggressive men and women. Moreover, the colleges, perhaps unintentionally, prepare for every other vocation better than for teaching, and their indirect influence is against teaching. University teachers are not very familiar with modern work in the lower schools, and the interests of their own special branches displaces any serious concern for a unified organization or an all around service in the schools below. They are not only more interested in the pupils who are going to college than in those who are not, but also in the pupils who are headed for their departments more than in those who are likely to elect other branches for future study. All this is turning nearly all the men and many of the best women, who in other times would have looked to teaching as a vocation, to other work, and it is lessening the independence and effectiveness of the teaching force to a degree which is hardly compensated for by the larger knowledge of educational principles and the improved methods of the modern agencies for training teachers. The live question is, how are we to assure a teaching force which shall be free from specially defective factors and generally as capable and spirited and aggressive as that which manages the other great, though less important, intellectual activities of the nation? Always a pressing question, the growing importance and the growing difficulties of the subject make it more weighty now than at any previous time.

However important the form of the legal school organization, and however imperative the character of the men and women who teach the schools, there is nothing about the schools so vital and, it may also be said, so difficult, as a sound determination of what work the schools shall do.

The minister of education in other countries does not have a very hard time deciding what the primary schools shall do and how it shall be done. He does it alone. He follows either the law or long and unchangeable usage. The teachers are men and

the tenure of position is for life. Every teacher obeys the minister's directions without question. He has to provide a simple curriculum for children of the peasant class who expect to live exactly as their fathers have lived. The work is not to inspire children to do their best and rise to high places among their fellows; it is not to fit them for the work of advanced schools; it is to drill them to read and write and work through very ordinary and dead-level lives. It satisfies the demands of the rather slow-going and monotonous life of the people whom these foreign schools serve.

It is wholly different in America. Our schools are not shaped and managed by a minister, a cabinet, or a monarch, but by the people. The common thought and general usage have settled the outlines of the system. Each community fills in the details and carries them as far as it will. Everybody has a proprietary interest in the schools. The administration is through popular elections, and changes in administration are frequent. Changes in the teaching force are frequent also. There is not much resistive power. Every one with a project thinks the schools ought to carry it out. It is not so hard for one with a scheme to load it upon the schools as it is for an administrative officer or a teacher to keep it out. People who mean well, but who are without any grasp of the general problem, often turn the course of the schools aside from its ordinary and natural channel.

From the standpoint of school administration, every American child is bred in the purple. He is to have everything that the richest child in the world can have in the way of instruction if he will take it, and all of the fixed influences, direct and indirect, censure him if he neglects to take it. Every boy must infer from all he hears that he will be discredited unless he follows an exclusively intellectual pursuit, and every girl must believe that her happiness depends upon her becoming literary and knowing about art and the opera, and wearing silks and directing servants—when the silks are often elusive and always illusory and the servants are more elusive and illusory still.

All classes mix in our schools. As I passed a ward school the other morning I saw two little girls, whom I recognized, pass in at the same time. One was the daughter of a prominent officer of the state and the other was the daughter of my office messenger. The association was quite as good for the child in the higher social station as for the one in the lower. It will do something to keep the first sane. The second will be most influenced by the foibles and fancies rather than by the substance and the real graces of the other.

At the annual meeting in a little school district, both rich and rural, on Long Island, held the other day, the accomplished wife of one of the wealthiest men of the country, whose name is

familiar to all, and the village liverykeeper were elected trustees of the district school. There was something of a contest, and they were both supported by the same votes. The woman stood for something very decisive in the betterment of the school. It was an admirable result. They will doubtless be of substantial service to each other and to the public in caring for the school. Each will surely learn something worth knowing from the other. In a common service they will be more tolerant of each other, and a rational service may lead two lots or "bunches" of people to see more that they like in each other than they had before realized. In an European school, or in the management of one, such associations would be wholly impossible and the manifest advantage would be absent. But the European political and educational systems are not intended to bind classes together or to give every one an equal chance with every other.

We have a continuous and pretty well articulated school system, from the kindergarten to the university. Teachers and children are continually enjoined to be thinking of the next school above. A teacher whose pupils do not pass is discredited. A child who does not pass is in peril of being eternally lost. This may not be really so dreadful to the individual teacher and the individual child, though each thinks it is. It may be as well to have some pressure as to have everything fall down and everybody become lackadaisical for the want of attention. But does it not inevitably attach more significance to the upper than to the middle schools? Does it not assume that the road to college and the road to glory are all the same?

And are they? No thinking man can doubt the self-satisfaction and enlarged intellectual enjoyment which commonly result from college training. No one will be disposed to deny the advantage which the liberally educated and disciplined mind has in severe mental work and particularly in intellectual combat. No one can fail to see how the higher institutions break out new roads and lead the thinking of the world to higher planes. And surely no school man can ignore the fact that the vitalizing, the energizing, and the steadying of the lower schools must necessarily come from the higher schools. But there are those who will deny that it is desirable that all children shall go to college. There are enough who do not think that it is better to have a college degree and admission to a profession, with little adaptation to it and little to do after it, than it is to master a manual vocation and have plenty to do. There are folks in the world who dare to suspect that many a one becomes really unbalanced and pretty nearly useless through college teaching and college study, when he might have been happy and useful if conditions and normal inclinations had been regarded and if he had found himself in a work where he could have had the reward and the joy which

come from accomplishing things. There are those who even venture to suspect that men and women with work which they love and the steadiness and balance and respect which they gain by doing it are safer citizens and more attractive characters than men and women who have been through the schools without being able to put the training of the schools to the doing of things which are of moment to the world.

It is not a matter of the value of the higher learning to the world at large; it is a matter of the power and purpose of each individual to make it of most use to himself. The unambitious or the incapable rich, who are not in danger of doing much anyway, may as well go to college, if they can be kept from ruining the colleges while there. The rich who have work and sand in them will ordinarily seize upon college training while they enlarge the substance and illustrate the point and power of it. The poor must balance values; they will coolly calculate the worth of it to any plans which they may have, or they will leave it to chance and take whatever the consequences may be. If there is something like a definite purpose in mind, if the college training is put to a real use, the consequence will be a finished and resourceful character, and the harder the work and the more the sacrifices, the stronger and the more dependable the character will be. If, however, there is no serious plan or purpose about it all, no power to appreciate and adapt the college training and discipline, the result will be a past master in dudism so long as one has the money to sustain the role, or a misfit and partial, or total, failure when one must earn his living.

The percentage of men who have reached the highest positions of leadership and influence without the training of the most advanced schools, as compared with those who have had that advantage, is surprisingly large. It is because they have had the stuff in them and it has been developed and seasoned in life. They have not depended upon books or been largely controlled by theories; they have squared their lives with the actualities of living; they have been both patient and aggressive; they have found the way to accomplish something worth while. It was something not set forth in the books. But this has been suggestive to the colleges and the courses of study, the characteristics of teachers, the methods of instruction, and the atmosphere of the places have been so radically modified in the interests of doing as against talking, that, aside from the increased number of students who go to college, the advantages to the college man as against the other is very substantially enlarged. And, of course, with an independent, sane, and balanced character, having the elements of strength and success anyway, the advantages of a college training can not be overestimated.

It is not true that good citizenship is gauged by the depth of culturing study or familiarity with philosophical theory. It rests upon the balanced sense which is the joint product of decent breeding, of familiarity with men and things, and of the labor which shows in things accomplished, either manual or intellectual, and in sweat upon the brow. The man who mends your shoes or makes your clothes is likely to average just as safe and potential a citizen as the one who tries to train your refractory stomach, the one who fills you up with economic theory, or the one who supplies theological deductions to your mystified soul. The one who produces physical results in life is certainly no less to be counted upon than the one who writes the more freely when he is not obliged to be troubled with any facts.

These considerations are at the bottom of the widespread criticism against our public educational system. Everybody worth considering knows that the mere ability to read and write is no adequate equipment for efficiency in our complex life, but everybody also knows that no system of training, no matter how elaborate, which leads inevitably to pursuits which are exclusively intellectual or only culturing, will sustain our complex civilization. It is right here that the plan and scope of our Western universities, very largely state universities, is pushing them strongly to the front rank in American higher education. The feeling is very common that there is no sufficient reason why the courses of study and the influences of the lower schools should lead decisively to the higher institutions which are only culturing or professional, or to those departments of universities which are essentially so. There is a strong and justifiable sentiment that the work of the elementary and secondary schools does not support the industrial as well as the classical or professional departments in the universities which have provided for all phases of human learning. There is a strong and sustained sentiment that the elementary schools ought to do more for the pupils who are not going to college at all, if the advantages of our popular system of education are to be equal for all. And there is a decided and a justifiable belief that the elementary schools, taken as a whole, train for versatility more than for exactness, and that—either because of this or because they have been loaded with too much, or both—they do not turn out pupils who can do any definite thing very satisfactorily when they must go to work.

If I interpret the situation correctly, the common sentiment of the country fully sympathizes with the old-line literary colleges. It feels that there is a place for them, and wishes them well. It has abundantly demonstrated its decisive support of university training in aid of the industries. But it demands that the elementary training shall lead more decisively to the industries and to business, whether pupils are going to the advanced schools

or are going to work ; and that the work of the lower schools shall be sufficiently concentrated and made sufficiently exact to support the expectation that pupils shall be able to read intelligently, write legibly, perform mathematical processes readily and correctly, and entertain serious notions of real work when they leave the schools. The objection is not that the schools do other things, but that they do not do these things before the other things, and that the result amounts to a discrimination against the industrial masses and the very ones who stand most in need of free education.

Then the whole question as to what the schools shall do is an open one. Apparently, they must have less, rather than more, to do. If not, then a large part of the children must have less. It would seem that there will have to be more differentiation of courses, with reference to future living. There will have to be more drill and more firmness of treatment in the purely elementary work at least. The work will have to be adapted to years so that whenever a child leaves school he may be able to do very well what the world may justly expect of one of his age. There will have to be more exact attention to present actualities than to remote possibilities. It would not be strange if the lower schools were yet required to give every child not only the means of informing himself and of expressing himself, but also a definite trade or vocation through which he may earn a living. This would be doing less for the children who will never go to college than most of the larger towns are already doing for those who go to the high school, or than most of the states are already doing for the thousands who go to the state universities.

Here is the great, overwhelming, and difficult question in American education. I surely could not settle it. We might discuss it in this Congress for a month, and we could not settle it. It is to be settled out of the abundant experience, the democratic purpose, and through the natural and logical unfolding of the free life of the nation.

There is another unsettled question, and clearly a very serious one, to which I must advert. It has reference to nonattendance upon the schools. It will not do to assume that all in this free country who ought to go to school will do so. All parents are not anxious about the educational welfare of their children. Some parents and children will wallow in ignorance unless they are punished for not taking advantage of the schools. And the worst of it is that the very common sentiment seems to be seriously indifferent to the compulsion.

The most recent data available to me shows the percentage of illiterate electors in England to be .009 per cent, and the percentage of illiterate recruits in the German army to be .05 per cent. In France 4.4 per cent of men and 6.3 per cent of women

signed the marriage register with a cross. In Switzerland .33 per cent of the men entering the military service were illiterate. The last report of illiterate conscripts in the army of Holland shows that it was 2.1 per cent and in the army of Sweden it was .08 per cent.

Now let us examine the figures of the United States census of 1900, showing the percentage of illiteracy among males of voting age in the United States. In the country at large it was 10.9 per cent. In the North Atlantic division it was 6.8 per cent; in the South Atlantic division it was 24.5 per cent; in the North central division it was 4.9 per cent; in the South Central division it was 23.3 per cent, and in the Western division it was 6.7 per cent. That is, in no one of these great divisions of our country is the showing so favorable as in any one of the countries I have named, and generally speaking it is so much worse as to shame us.

Take several typical states from east to west: In Massachusetts the percentage of illiterate potential voters is 6.4; in New York, 5.9; in Ohio, 4.8; in Illinois, 4.8; in Iowa, 2.7; in Nebraska, 2.5; in Colorado, 4.1; in Montana, 6.1; in California, 6.2, and in Oregon, 4.8. Taking states from north to south: In Michigan it is 5.5; in Indiana, 5.6; in Kentucky, 18.8; in Tennessee, 21.7; in Alabama, 33.7, and in Georgia, 31.6. In no American state is the showing so satisfactory as in England, in the German Empire, in Switzerland, in Holland, or in the Scandinavian countries.

I can not analyze and exploit this all-important subject here as I shall endeavor to do in another place at no distant day. But here it may be said that there is abundant evidence of a serious difficulty in the indifference of public sentiment or in the character of our educational legislation or in the execution of it. And it may be added that, no matter how great our revenues or our energy or our genius for doing things, no matter how rich, how strong, how commercially successful we become, we shall not honor ourselves nor illustrate the advantage of democratic government to other peoples until as many of our people as of theirs are taught to read and write. Whether we can do it or not is a very large matter for American statesmen, and an unsettled and grave question in educational administration.

There is still another matter pertinent to our subject, and with a reference to that I shall release your patient attention. There is a frequently expressed disposition to hold the schools responsible for about everything that goes wrong in the country. If there is an epidemic of crime, or an outbreak of objectionable business methods, or any other distinct evidence of widespread moral turpitude, or if all boys and girls are not more completely ready for a swifter and more complex life than was ever expected in all history before—the schools are taken to task for it.

Every step and every influence of the common schools make for character. It is true that religious instruction is not very common—not as common as it used to be—but it is also true that it is as common as denominational opposition will permit. There is nothing done that does not contribute to cleanness and decency in living, to exactness and correctness in thinking, and to refinement and trueness in feeling. Everything is done in these directions up to the very limits of opportunity.

It is a fundamental policy of this country that political officers shall not meddle with denominational instruction, and that ecclesiastical officers shall not bend the policies of the state to denominational ends. It is not because of any indifference to religion, but because of the necessities of the case in a cosmopolitan population of freemen and in a state which is opposed to all favoritism and stands for equal and exact justice for all. This policy leaves religious teaching to the family and to the church, unless the universal consent invites the common schools to give it. And it seems to me that between the schools, and the churches with their auxiliary agencies, and the family life, the children are being trained in free religion and sound morals about as well as can be expected and quite as well as in any days of yore. Indeed, it seems to me that our democratic life and our free and rational teaching are developing a people with more of the elements of undefiled religion and with less of the factors which have burdened true religion than has been common in other lands and in other days. And in this the common schools are doing all that the sound moral purpose of the country will sustain and all that the settled political theory of the country will permit.

But there is a difficulty, extended and discouraging, outside of the schools. It operates in spite of the schools. It grows out of the American disposition to place freedom above security, to protect liberty at all hazards, and take the chances of license and its consequences.

It seems to me that many of the common usages and some of the most conspicuous object lessons in the country make for dishonesty rather than integrity. An infinite number of people have become what once would have been thought exceedingly rich. When one becomes half-way rich he becomes money-mad and resorts to methods for overreaching all the rest with an ingenuity and fiendishness which out-devils the devil himself. There is lack of law and lack of prosecutors to stop him, and his success in gaining money by immoral methods and in keeping out of jail—through the help of astute lawyers and abhorrent forces—predisposes too many of the rest to copy his example. Some phase of this thing is everywhere in the land and it corrupts the life, particularly the young life, of the country. Are the schools responsible for that?

Again, the railroads are great educators. They educate us in much that is good, and also in much that is bad. They train us in promptness—and in evasiveness. The laws concerning them are not yet very well settled. They observe no moral restraints not fixed by law, and they are past masters in the art of changing and evading the laws which they dislike. Men who are all that can be desired in their individual characters are often all that is undesirable in corporation service. But this is not all, and perhaps it is not the worst. They assume that every one else will violate or evade the law if he dare. For example, they assume that everybody will steal from them, and, with something of a fellow feeling for those who do, the matter is soon dropped when they find it out. They closely inspect and often outrage honest people who board their trains. When they find one on their trains wrongfully, they put him off and that is the end of it. The decent folk resent the shabby treatment and are predisposed to retaliate, and the indecent folk get off so easily that they are predisposed to try it again. Upon an European railroad every one is treated with politeness. It is assumed that one who boards a train has the right. If one is found on board without a ticket or money he is carried to the next station and put in jail. The road and the public prosecutors make punishment sure and severe. The honest people get decent treatment and the dishonest ones get the punishment they deserve. It educates in integrity more than we are accustomed to think. It is particularly impressive upon the ignorant and upon the young. If, then, native honesty, or at least, correct living, is more common among the masses of an European than of an American city, are the American schools responsible for it?

Yet again, nothing is a legal crime until a statute makes it so. Criminal procedure rests upon legislative acts and not upon the common law. The regulation and punishment of crime is far from settled. It has not kept pace with the progress of the country. It is so dilatory and uncertain as to shame us. Money can defer punishment indefinitely except in the most flagrant and noted cases—and often, indeed, in those. Public officers charged with prosecutions are sometimes found dividing the plunder with thieves in consideration of immunity from punishment. The thing pervades our affairs broadly and makes a vicious impress upon many lives.

Here is a great matter outside of the schools which is unsettled and which will have to be settled. It is wholly unfair to charge any lack of moral character or of common honesty which may be discerned in the country to the plan and scope of the educational system. When the law is perfected and is observed, when all may know that it will be speedy and sure and equal in its application to all, the matter of correct living and of moral character

in this country seems likely to rest upon as sure a foundation as in any other country. The difficulty in this behalf seems to lie in the rapid growth in population, in the overwhelming changes in manner of life, and in the backwardness of legal and administrative systems, rather than in fundamental political principles or in the plan and scheme of the schools.

The men and women of the schools are so accustomed to settle things that they are rather predisposed to shoulder all the burdens that are shied at them and determine all the hard problems that come up. The unsettled questions that are legitimately and necessarily upon us are many enough and heavy enough. If we throw back upon the country the hard nuts which are not ours at all, if we resent the constant attempt to use the schools for special ends, if we confine them to what they must do to vindicate our political and educational theories and justify the money they cost, we shall have quite enough to do. But we shall be able to do it. As some matters that are outside of the schools approach solution, the unsettled questions that are necessarily inside of the schools will settle more easily.

The nation is just beginning to realize that the fundamental political principle which holds all men and women equal before the law, with the now well developed national policy which provides free instruction to the very limits of human knowledge to all who will come and take it, involves an expense of unexpected magnitude and presents questions of unprecedented difficulty in organization and administration. But there will be no turning back. More cheerfully than the people meet any other tax, more cheerfully than any other people ever met any tax not vital to the national defense and the saving of lives, the American people supply and will supply the funds for universal and liberal education. The difficulties will not be met in a year; they will never be settled in a corner. They will be solved by the rational projection of the political theories which are the inspiration and the guide of the nation's life. They will be met with courage and confidence, even with wit and enthusiasm. They will be settled through discussion, and yet more through experience. Not all that we plan will come to pass. The unexpected will often happen, and in time we are likely to see that the unexpected is better than the plan we made. The logically progressive purpose of our millions of freemen, the gradually unfolding scheme of our nation's mission in the world, advancing in accord with a plan that is more than human, will overcome difficulties and break out the roads for a sane and balanced system of education which will give most to the nation through the opportunity it will hold out and the encouragement it will give to every one.

THE RELATION OF THE PACIFIC COAST TO EDUCATION IN THE ORIENT.

By BENJAMIN IDE WHEELER.

The ends of the earth at last have met. They have met and joined on the American continent midway between the Asiatic east and the European west. A place and shelter for the meeting has been prepared in the form of a nation blended out of all the bloods of mankind, and builded neither on race nor the cults of kinship, but on the rights of man. This much human society has done, and geography has enforced the work by setting the abode of this nation between the two world-seas whose free highways make their side of the globe the easier way from the old Occident to the old Orient. Four hundred years after the Cabots touched the Atlantic hem of North America and one hundred years after Lewis and Clark brought the Cabots' work to fulfillment in carrying the Anglo-Saxon name through to the Pacific hem, in the year of our Lord, 1905, delegates of the greatest European empire followed the track of the sun a hundred degrees of longitude westward and delegates of the most vigorous Eastern power faced the sun and journeyed one hundred and thirty degrees eastward until they met in Portsmouth, and if they had reversed the division of distance it would have been in Portland—in either case upon a continent prepared for them by collusion between the separate developments of government and of geography, upon a continent which was no other than that unexpected dyke of land which only four centuries ago suddenly arose out of the ocean's mist, and planted itself upon the map to block Columbus' way, when he sought the Orient by reversing the direction of the old-time caravan routes.

The arteries of empire and commerce in the twentieth century world pulse through the two great oceans. The great powers are those that maintain great navies. The ancient world looked inward with its back to the oceans and dealt with the land and inland seas. Power was quoted in terms of armies, and what were called fleets were merely armies fighting from scows in land-locked waters.

The ancient world in its highest organization consisted of two mutually exclusive parts, on the one hand Europe with Mohammedan Asia and Africa, on the other India and China. Between the two there was exchange of goods at arm's length, but no exchange of ideas or institutions. The Occident and the Orient dwelt apart and developed as antitheses. They never have understood each other; the fundamental concepts of the life-thought differ *toto coelo*.

The old Occident, Europe and Mohammedan Asia and Africa, was established in a blend of two minor antitheses, Europe and the nearer East. The Mediterranean was the mixing pot, Constantinople was the label and seal. The nearer East had the sources of its life in the civilizations of the two great river-valleys of the Nile and the Euphrates. Europe assorted its races by means of its rivers, pre-eminently the Volga, the Dnieper, the Vistula, the Elbe, the Danube, the Rhine, the Seine, the Rhone, and the Po; and by its two southern peninsulas, Greece and Italy, inserted the wick into the oil of the greater world civilization. Greece discovered the creative freedom of the human mind, and established thereon the only human freedom that was ever worth the while; Palestine yielded faith in the goodness and power of the single God; Rome provided for this mind and spirit the body of law and government, and out of the trinity arose the Mediterranean civilization we call European, of which our history, politics, art, thought, ethics, religion, in fact, we all of us in all our spiritual being and environment are thus far an established part.

Over against this Mediterranean Occident has stood through all the ages unperturbed and impenetrable the incomprehensible Orient of India and China. The West could only understand their spices; not their salt. And for the spices and other spicy wares the dull camels tramped the Kashgar and the Kabul routes through the dark and unrecorded centuries, the only bond between the two great world-halves which were and are and mayhap always shall be. Ninevah and Trebizond, Babylon, Tyre and Sidon were built of the drippings of this inter-world-half trade; then when it diverged through the Red Sea, Alexandria was enriched by it; and later when the Saracens intervened to disturb the old routes, Venice and Genoa became its monuments, and last of all with the discovery of the route round the Cape of Good Hope nations were enriched, first Portugal, then Holland, then England. It was not a new continent that Columbus set out to discover, but the old spices and gold of the old Orient. The finding of America instead was his undoing.

The yearning of the West has always been toward the East. It has sought its wares and spices, but behind all that has lain the half-formulated, half-confessed instinct to lay hand on the slumbering power that lurks behind the mystery of the East stored in the long-schooled industrial patience of the Chinaman and the cosmic philosophy of the Hindoo. The emergence of the American continent as a mighty barrier across the path of the western route became a discouragement to the thought of using that route. The search for a passage to the north of North America persistently failed. The southern tip of South America pushed itself down more than twenty degrees of latitude farther than the Cape of Good Hope. Even the narrow isthmus of Panama

proved a barrier rather than a highway. It took four centuries for men to dominate fully the barrier by occupying it with homes and cutting it through with steel highways. It will be yet a decade or more before the Panama canal is cut through.

Meantime the outreach toward the Orient has reverted to the eastern routes. First came the route round the Cape of Good Hope, which created the colonial system of Holland and the empire of England. Then came the short cut by the Suez Canal through the Red Sea. Then came the project of a railway joining southeastern Europe by way of Asia Minor and Persia to the head of the Persian Gulf. Then came the development of Russia's trans-Caspian route by steamers across the Caspian and railway on through Turkestan by Samarkand. Only the check of English power has prevented northern Persia and northern Afghanistan from melting into the jurisdiction of Russia and admitting the passage of a railway by the old route, Teheran to Herat to Kabul to India. So the ways revert to the old-time track of the caravans. And finally was built the trans-Siberian line on Russia's own soil almost to the shores of the Pacific. Even if northern Manchuria could be called Russian soil, it could not yet be granted that a railway issuing at Vladivostok had reached the Pacific, for that port was closed a third of the year by ice. The day came, however, when the watchful eye of England was averted or was closed in sleep. Russia displaced England in its place as China's good friend and forced it over into an alliance with Japan. Li Hung Chang was bought with Russian gold. Russia carried her railway through to Port Arthur, and at last had found the open sea, and enrolled her destiny with the nations which found their empire in battleships that ply the outer seas. For centuries she had struggled to reach an ocean, but the nations plotted to keep her an inland power. The Baltic is almost an inland sea; its harbors are icebound in the winter, and Scandinavians and Germans control its exits. The great powers by a conspiracy of inaction leave the stranded hulk of Turkey to block the exit of the Black Sea. When Russia has looked for a way out of the Persian Gulf, England has always been ready to set a check, and now the interests of Germany, which in recent years has been establishing itself as guardian of senile Turkey, will be even more potent to prevent. The commercial and perhaps the political interests of Germany lead her along the southwestern face of the Russian glacier. Her wares move southeast. In this direction, too, is the line of least resistance for the development of her political power. The railway to the head of the Persian Gulf will be hers. It is therefore just at present her policy to be the good friend and candid adviser of Russia, and gather in all the wreckage that issues from Russian disaster.

When at last in 1898 Russia seemed to have found its clear way to the open sea, it appeared that the history of the world had advanced into a new stadium. A new power had entered the lists for the empire of the outer ocean. Northern and central China were to be brought into relations and assimilated to the west through the mediation of half-occidental, half-oriental Russia, and oriental Japan of occidental veneer was to be robbed of its task, and stand doomed to finally inevitable absorption into the mass of Russia. Then it was that two events presented the opportunity for a total shifting of the horoscope. These two events were the Boxer uprising and the Russo-Japanese war.

The former gave the opportunity for the issuance of John Hay's circular note stating the policy of the "open door." The circular note was a device forced upon our state department by the classical incompetency of the United States senate under its present constitution and its unwritten rules of courtesy. It is now a body incapable of largeness of views or promptitude of action. John Hay seized the opportunity and secured the assent of the powers to a policy opposed to partition of China and established, especially since the reaffirmation obtained by a second note, this policy in a security as firm as any body of international treaties could assure. Throughout the Boxer troubles John Hay deftly avoided all recognition of the uprising as involving a state of war, and thus prevented Russia from obtaining a hold upon Manchuria that could arise from conditions of war. Herein lay his most certain and distinguished diplomatic service. This was an achievement of first importance, shapen in terms of the whole world history. Russia had at the beginning assured our government that it proposed no permanent occupation of Manchuria, and was present there only as the owner of a railway anxious only to secure peaceful and stable conditions for the operation of its property. John Hay took regular occasion to remind the representative of the Russian government at Washington of this assurance, and to impress upon him the fact that our government had noted the assurance and accepted it in literal form.

John Hay appeared upon the scene in this critical juncture, because our controversy with Spain had just at that time laid responsibilities upon our nation and established its interests in Asiatic waters. The juncture was rendered for us peculiarly critical by the fact that just at that time England was preoccupied in the Boer war, and had suffered notable decline of international prestige through the prolongation of that conflict. Whether by agreement or otherwise the United States stepped into the administration of what had hitherto been the English policy in the Chinese Orient. It was the policy of nonpartition, of having China as a whole to work out its own adjustment to world-conditions, to administer its own awakening.

Close upon this event followed the Russo-Japanese war, the issue of which has certainly been to thrust back Russia from its debouchment upon the open ocean, and transform Japan from an island power to a power encircling the Sea of Japan.

If this issue shall be established as a permanent fact of history, the verdict means that this latter day reversion to the caravan routes and the westward track as the means of accomplishing the assimilation of the East to the West has met with rebuff, and again gone down in failure. The failure will have been due in chief measure to two things: first, the appearance of America as a power in the Pacific; second, the rise of Japan into the position of a modern nation able to assert itself. But it was from America Japan received its impulse toward the adoption of the modern equipment of life. The occidentalism which has affected it has come around the globe westward by the ocean route, not by the old eastward route on land.

The great problem with which the world-history will have to deal in the next centuries concerns the assimilation of eastern Asia to the other world-half. All through the long history of mankind India and China have gone their own way. They have received little or nothing from the thought and experience of the rest of the world, and given little to it. Their views of the universe and of the purpose and meaning of life are their own, developed out of their own experience and reflection without conference with the West. The man of the West and the man of the East can not therefore understand each other. There are no common factors in their thought. In superficial things they may seem to establish a temporary understanding, but they are apart on the fundamentals. They translate each other's thoughts by words that seem to be equivalents, but they are not; the concepts differ. When the Yankee thinks he has caught the secret of the Chinaman, then is he of all men most miserable; his trouble has really just begun, for to his ignorance is added the deceitful assurance of knowledge. To understand the guileless prattle of one of these sons of the Celestial kingdom is one thing; it would be quite another to enter the mysterious caverns of a Chinese head, dwell in the quirks and convolutions of his brain, and look out through his eyes upon the world. Even if you then thought you knew the Chinaman, you surely would not recognize the world as being anything you had seen before.

The human society to which all we occidentals belong is a long-time work of history, and highly complicated both as to materials and the forms of their blending and use. Every people and tribe, every religion and culture, from Assyria to Ireland, has contributed its part. We measure boards by Assyrian inches and jokes by the standards of Irish humor. All the elements of this vast and complicated social mass have become with time and in-

tercourse and interchange more or less assimilated to each other. An Armenian and a Swede are infinitely nearer to each other than either is to a Hindoo or a Chinaman. India and China have not yet come into the world's kneading-trough. The time of their bringing in cannot, however, be longer delayed. The globe has shrunk to one-half in twenty years, and the nooks and lurking places are disappearing, and the barriers of mountain, desert, ocean.

The assimilation of this other world-half, so far as it concerns fundamental things,—the view-points of the inner religion and folk-philosophy,—will be slow, exceeding slow. The solid earth may not have the staying power and patience to wait therefor. But in the superficial things of materials, their making, use, and interchange, the assimilation will come fast, possibly too fast for the safety of the world. If the enormous force of trained industrial patience of China shall be on a sudden armed with modern steel weapons, i. e., machinery, engines, dynamos, rails, it means, of course, for the world an industrial cataclysm, an economic revolution and upturning from the depths. The Chinese patience in toil is not a personal acquisition of individuals; it is trained into the bone of the race, and the quality and quantity of it combine to give China a latent working force, an industrial power far exceeding that of all the nations added together. The native steadiness and conservatism of the Chinese must, however, give us fair assurance that the industrial transformation will come gradually enough for economic conditions at large to adapt themselves thereto.

However this all may be, the main fact which concerns us in connection with the analysis we have been attempting is this: the assimilation of the Chinese Orient to the modern world is to be through the Pacific Ocean by the westward path of the sun. The Pacific was of old a lonesome place where the day could change its clothes of number and name without being observed. The old world looked inward; China and India toward their river valleys, the occidental half toward the Mediterranean. The modern world is the old world turned inside out with outlook toward Oceanus that flows around the continents. When America was first occupied by colonists the inward-looking people of the old world, like the dwellers in an old Roman house built around a court with few outside windows, regarded the new continent as an outbuilding far back in the back yard. The colonists themselves thought of the Atlantic as something isolating them from the Old World, and they claimed it as a wall of separation to free them from entanglement in the worn-out policies and systems and traditions of Europe, and to give them the thing they called "liberty!" But now that the world has been turned inside out, the Atlantic turns out to be only an estuary of the great ocean, and

America instead of being an outlying continent hidden away under the sunset assumes its place in the center of the world, midway between the old Occident and the goal of its incessant, age-long yearning, the unfathomed East.

Slowly at first, but steadily throughout, and with cresting waves of energy in the last half century, the tide of advancing occidentalism has occupied the new continent and finally covered with deep flood its western coast. The Pacific Coast has thus become within fifty years the outer selvage of occidentalism. Its population, too, represents by its aggressive individualism, its riskfulness, and its power of creative initiative, the most advanced type of the occidental spirit. They are what the old Greeks were in the days when Greece was the inner hem of the Occident.

A century ago when the world still looked inward and America was a distant annex and the Pacific a desert of waters, the eastern shore of our continent formed its front and facade. Now, with the world turned inside out, with the Pacific established as the world's forum, with the world's contrasted halves arrayed on the opposing shores, the front of the continent has shifted to the West. For its mission of the future the United States looks westward. A recent history of the United States cast in terms of geography opens with the statement: "While the development of the United States in the first century was clearly determined by their position on the Atlantic Coast facing Europe, it is to be expected that their history will be henceforward determined by their position on the Pacific facing Asia." (Semple.) I think this must be the opinion of all who have considered the course of human history in the large; I know it is the decided conviction of the historian who lives in the White House at Washington, a conviction which has been borne in upon him with a special force by the events of the last three months.

This much by way of introduction, but the whole doctrine of my discussion inheres in my introduction. I might, therefore, do well to stop at this point, and I am sure you would be quite satisfied that I should, but there are yet sundry things that I would fain say, if only by way of annotation to my introduction.

The essential spirit of the modern ultra-occidentalism is betrayed in its ideals of education, which it derives from the Greeks, the ultra-occidentals of antiquity. The nucleoidal idea therein concerns a view of the universe wherein thought is the enlivening force, and the free spirit of thinking, planning, willing man the real creative source. Science is the order that human mind injects into the haphazard and waste of savagery and nature after abstracting from them their thoughtless laws by observation. The purpose of education is the ennobling and fulfillment of manhood to its liberation from circumstance, impulse, prejudice, superstition, the rule-of-thumb, and all things that mean slavery to the

•

instant vision and thoughtless force. The aim of education is to develop to the full all the native capacities of the individual, so that he may live abundantly and be a freeman, a freeman in the face of unthinking nature by dominating it, in the face of his human environment by judging it correctly and dealing with it justly, in the face of his own self by controlling it. The theory of the whole Chinese system of education, whether in manners, crafts, or letters, involves the effort to fit and constrain the individual into conformity with his environment, so that he may perform the tasks that are awaiting him and live the life his ancestors have prepared for him, with the maximum of adjustment and the minimum of friction. For discovery, invention, innovation, creation, there is no provision, except prevention. It approaches what is viciously called in this country "practical education," the education that assumes to give skill and the knowledge of recipes without that control of the sources and bearings of the matter which enable mind to do its creative work of adapting means to new ends, meeting new emergencies, and making a man a freeman, the master of his job and not its slave. While the Chinese education seeks to shape the individual to his environment, the American training in its best form seeks to give the individual power within himself, i. e., to make him powerful in himself to shape and create his environment. To the American, life is real; to the Chinaman, it is a drama set upon a stage. The business of the individual is to take the part and play the role assigned to him in the drama. To live well in the Chinese sense is to live in "good form," to "keep face." This is the antithesis both in view of life and theory of education which we are called upon to bridge.

Within the next decades the educational institutions of the Pacific Coast in first line of those of America will surely be called upon, to an extent out of all proportion to anything in the past, to render service in opening Western education to the people of the Orient. As it always has been in the history of human education, betterments and reforms will proceed from the top downward. The universities will lay the foundations. It will be the Chinamen trained in the best our universities can give who will begin the reorganization of their home education and train the teachers for the common schools. A recent Chinese graduate of the University of California has already been put at the head of the educational system of a Chinese province, and is just now busied with the difficult task of founding embryonic normal schools for the training of the first teachers who are to infuse Western learning into the heads and lives of Chinese boys. Within the three past years, aside from the Chinese coming to the university of their own responsibility, a considerable number have been sent by one or another of the provincial governments to be

trained for the government service, some in law, some in political science, some in education, some in engineering, some in commerce and some in finance. There are no better students today in the university. If we can teach them initiative and sense of control and the modern sciences whose development rests upon these qualities of mind, yet we can learn from them, as our civilization can learn from its Eastern antipode, a patient recognition of the power of time and of the force residing in the inertia of great social masses and the value of persistent adherence to the obligations of duty and loyal service to the inherited order of the family and society. A man is of small use to his day and generation, be he Chinaman or American, who absolves himself, as hermit, tramp, and bandit, from all relation or obligation to the life-line of descent and posterity as established in the laws and responsibilities of the fireside, the homestead, and the home community.

An entirely different problem confronts us regarding the Filipino people who have fallen under our oversight in the order of events. They came to our hands because we had a Pacific Coast. Dewey entered Manila Bay because a Spanish fleet lying there was a menace to the harbors of our coast. The rest followed inevitably. What we have done as a nation for these people is worthy of the best interpretation of our democracy. We have done what no nation has done for a colony of alien race. We have sought to give them through education the power of self-determination. They differ from all other Oriental peoples in that they have enjoyed the advantage of centuries under Christian influence. These centuries have not been in vain in bringing them nearer toward an assimilation into Western civilization. While lacking the Chinese stability, they are bright and versatile, and the best of their youth will respond readily to the opportunities of our higher education and develop into leaders of their people. What is needed by their people is leaders in commerce, law, medicine, engineering and agriculture—not politicians. Already in considerable numbers Filipino boys are coming to our universities and schools, and the immediate future will make large demands upon the institutions of the coast for their care.

Our nation was shapen for the work of evangelization. It has gathered into it all the bloods and faiths of the occidental world, and has moulded them together into a people out of which is emerging the concept man. It has based its institutions upon democracy, the most daring optimism devised by man, a system of governing whose chief *raison d'être* lies in its power to educate and uplift men by conferring responsibility and saying to them, "The law and the kingdom, lo, they are within you." The faith of our fathers is our faith today; our evangelizing zeal is the zeal of democracy,—the ultimate zeal of the West,—to make men self-determining and self-governing. Is democracy a fail-

ure? Our answer is the answer of John Paul Jones to the question of the Serapis, "Have you surrendered?" "We have not yet begun to fight."

EDUCATION IN A DEMOCRACY.

By F. LOUIS SOLDAN.

The Nature of Democracy.

Man's culture has been of long development, beginning in ages of which history has no record. Some of the achievements of civilization have been by design and through the work of individuals. Art and literature embody, in the first place, the genius of the artist. Other achievements of civilization have grown from within the race itself and have come into existence through the instinctive action of the masses who are not always conscious of the spirit that impels them.

The great institutions which hold society together, family, state, and church, embody the experience and wisdom of the race. No one human mind has planned them. They have been slowly evolved and created by mankind. They make possible peace on earth, order, happiness, and the achievement of all things great and valuable in human life. The culmination of the political evolution of the race is found in the democracy of modern times. The democracies of ancient Rome or Greece were early phases in this evolution, but they were deficient in important respects. A ruling class had taken the place of the king, and there were bodies of men in those republics which were disfranchised. Both ancient and modern democracy place the public good above every other consideration, but while ancient democracy defined the public good as the honor and power of the state, modern democracy understands by it the general welfare of the masses. Its belief and tenet is the equal rights of all men. Modern democracy is the most perfect application of the idea of Christianity to the conduct of the state. Democratic institutions are ultimately based on the brotherhood of man and of man's duty to his neighbor.

Modern democracy is altruism. It recognizes that the welfare of each individual is bound up with, and dependent on, the welfare of all others. In a democracy, every man feels that in defending and protecting the rights of the lowliest and weakest, he defends and protects his own. Modern democracy is more than a political institution; it is a confession of faith. For this reason the history of our nation is not of local interest only, but concerns the whole world. Our country has made the idea of

democracy once more respected in the world, after the first French republic ended in failure and disenchantment. The modest yet bold experiment of our forefathers to found a government on the equal rights of manhood, with its purpose of securing to each life, liberty, and the pursuit of happiness, has grown to be an example and a peaceful challenge to the peoples of the world. It has re-established the faith in the possibility of a government by the people and for the people. In maintaining her democracy, and developing through it, resources, power, and culture, which could have resulted in no such measure under any other form of government, Columbia holds up the torch of enlightenment to the European world.

The arrival of the democracy among the nations of the earth means a turning point in the history of the world. Our unparalleled growth in population, the immense development of our resources and wealth, make us easily the most powerful nation on earth, and all this influence is thrown silently in the scale of popular liberty and democracy. The first Napoleon, who had felt the fatal grip of autocratic Russia, said: "A hundred years hence, Europe will be Kossack or republican." The arrival of the United States among the nations has made the cause of liberty impregnable. With our active faith in democracy, we do not ignore the many and grave imperfections that cling to our democratic institutions, especially in the government of cities. Democracy is an evolution, which means, I take it, that there is a constant elimination of worthless and decaying features and a strong current of inner life toward the creation and survival of what is fittest to endure. The poison that has found its way into our communal life will be ejected and overcome through the vigor of our national system and the wisdom and character of our citizens.

Among the social agencies on which democracy depends for its existence and growth, education ranks first. The family, the church, the school, and the newspaper, have a share in furnishing the educational conditions which democracy needs for its life and growth.

The Individual in a Democracy.

The reason usually given for the demand that education should receive the greatest care in a democracy is that he who governs a land should be a wise man, and that since each voter helps to govern the country, he should be as well educated as the sovereign of a monarchy. As a matter of fact, the voter is not called upon to map out the policies of government. The matters which he is to decide are mapped out for him by the great political parties which contend. But while the customary argument has a somewhat exaggerated form, it expresses nevertheless an undeniable truth. The citizen of a democracy governs

and is governed at the same time. He helps with his vote to determine issues and to elect magistrates, and he is in turn governed by the vote of his fellow citizens and by the magistrate of their choice. The individual may never be destined to become a leader, but intelligence is as necessary to those that follow leadership in political matters as it is to the leaders themselves. Every citizen in a democracy should acquire through education the ability to understand issues and to choose and accept leadership. The soldier needs intelligence as much as the captain. The dangerous leader in politics is possible only through the ignorance of his followers. Moreover, the general intelligence of the people exerts its power constantly in producing, modifying and directing that mysterious and potent factor in the life of democracy which is called public opinion and which is nothing but the cumulative wisdom and the ethical force of the masses. Public opinion is the resultant of many minds and many opinions, each exerting pressure in accordance with its individual force, character, and life position. Public opinion thus created moves the affairs of the nation, as the joint action of current, wind, oar, and rudder moves the boat across the river in the line of the resultant of these forces.

The Public School Idea.

With the self-evident necessity of general education as the basis of democracy, it is remarkable that the idea of the public school has but slowly found its way into the history of our institutions. A hundred years ago there was no system of public education in the United States. There were schools maintained by parents, by school associations, and some public schools supported by states and municipalities, but there was no system of public education. A beginning had been made in colonial times. Some of the colonies, especially those of New England, saw the necessity of public education from the beginning. In other colonies, however, education received little attention. Some of the royal governors were opposed to it. The extreme views of Governor Berkeley of Virginia, 1641, have often been quoted. Berkeley was an educated man, a graduate of Oxford, and ought to have appreciated the general value of education. He said: "I thank God there are no free schools nor printing presses, and I hope we shall not have them these hundred years; for learning has brought disobedience and heresy and sects into the world, and printing has divulged them and libels against the best of governments. God keep us from both."

Nor was the view that it was dangerous to educate the masses confined to the southern colonies. It may be traced in the definition of purposes for which King's College, the predecessor of the splendid and liberal Columbia College of New York, was established; namely, to educate young men of noble birth

and to counteract and resist the spread of republican ideas. The Dutch had established free public schools in their American possessions during the seventeenth century, but when the English wrested the colony from Holland, these schools were stamped out and nothing was done to replace them. The subject of public schools was one of the causes of constant contention between the Dutch communities and the English governors. Even in the New England colonies the principle that public schools are a necessity for the state and hence must be supported by every taxpayer, whether he has children of his own or not, was but slowly evolved.

In a general way the steps in the evolution of the idea of public schools conducted by the state may be summarized as having passed through the phases of, first, encouraging schools and allowing, not prescribing, contributions from public funds; second, the obligatory support of public schools from the public funds; third, making the public schools the common schools for the people.

The first attitude of those colonies in which educational sentiment existed at an early time was to encourage and prescribe education—but there was no provision, as a general rule, that the state must supply such education free. It was encouraged or prescribed by the state, but the parents were supposed to pay for it.

An early law of the general court of Massachusetts directed that the selectmen of every town should prosecute those parents who refused "to train their children in learning and labor," and a fine was fixed for those who did not teach them "so much learning as may enable them perfectly to read the English tongue." While education was thus made compulsory, the burden of providing the means for it was usually put on the parent. The act just quoted contains evidence of the consequences which result from making the parent bear the expense of the maintenance of schools. The poor, the shiftless, and the stingy parent would rather not send his child to be instructed than contribute to the support of the school.

The step from the encouragement of public schools to that of having the state provide for such schools was but slowly taken. The most famous school law of colonial times, the act passed by the Massachusetts General Court in 1647, while taking the position that the child must receive an education at all hazards, imposes the duty of paying for the schooling on the parent in the first place, and only in the second place on the state. The act reads, in part, as follows: "To the end that learning may not be buried in the graves of our forefathers * * * it is ordered that every township within this jurisdiction * * * of the number of fifty households shall appoint one within their town to

teach all such children as shall resort to him to write and read, whose wages shall be paid either by the parents * * * of such children, or by the inhabitants in general." This document is thoroughly consistent. When the maintenance of public schools is defended for the reason that learning should not die out, there is no defense for burdening the state with the cost. Provision for public education at public expense becomes justifiable only where its necessity for the very existence of the state is recognized. During the eighteenth century the public school idea made but slow progress. It was only after our independence had been achieved that public sentiment in regard to education broadened. The act of 1787 which created the Northwestern Territory gave a large part of the public domain to education. The changed attitude concerning the relation between the state and education is best shown by comparing the act just quoted with the famous utterance of the great statesman of the age. Daniel Webster said in 1821: "For the purpose of instruction we hold every man subject to taxation in proportion to his property, and we look not to the question whether he himself have or have not children to be benefited by the education for which he pays; we regard it as a wise and liberal system of police by which property and life and the peace of society are secured. We seek to prevent in some measure the extension of the penal code by inspiring a salutary and conservative principle of virtue and of knowledge in an early age * * *. We confidently trust * * * that by the diffusion of general knowledge and good and virtuous sentiments the political fabric may be secure as well against open violence as against the slow but sure undermining of licentiousness."

The obligation of the state to provide free education has been practically settled by public opinion, but the question remains a matter of theoretical discussion to this day. In one of the last of his essays, Herbert Spencer, the most influential philosopher of England, denied that the state had any right to compel him to pay for the schooling of his neighbor's children.

Even at present the question about the rightful extent of public education is sometimes raised. There are still those who think that the state should not provide an education that goes beyond the three R's. They may possibly believe in public elementary schools, and may not object to state universities, but they are opposed to the maintenance of free high schools. The answer which the practice of the modern state gives to these theorists is, to use the language of the English scientists, that it erects a ladder from the gutter to the university by which the poorest child may rise to the highest educational plane. The attitude of the people of the United States, and the faith that they entertain that public education is the basis of democracy and the condition of its stability is shown by the enormous sacrifices which our people

through congress and legislature have brought for the cause of education. While the general government, as a rule, does not support schools directly, its gifts to the cause of education in grants of the public domain alone amount to eighty-six million acres, or an area equal to that covered by the New England states and the states of New York, Maryland, and Delaware. It is equal to more than two-thirds of the entire territory of the Republic of France. The amount spent in the United States for teachers' salaries alone amounts to more than one hundred million dollars per year. The people could not attest their faith in the supreme value of education in democracy in a more emphatic way than by the support they give to the schools.

The conviction of the importance of public schools for the life of the state, deep seated as it seems to us at present, has been of gradual growth. While the newer state constitutions invariably provide for education, the older state constitutions contained no such provision.

The Common School.

The public school as established in the first half of the last century did not immediately become the "common" school for every rank and class of the people. There were sections in the country in which it was looked upon as a school for everybody, as an institution to which the poor could send their children without pay. Although this idea is becoming obsolete, it still lingers in the minds of some. I remember a conversation with an educated and somewhat aristocratic gentleman of commercial prominence who commended the improvements effected in high schools and incidentally said that he sent his children to some private school. He remarked: "I put my children in a private school because it seems to me to be wrong for a man to get an education for his children for nothing, when he is able to pay for it."

The public school has not only the task of disseminating intelligence, but also the further function of building up the nation by spiritually assimilating the people. In the common school, the children of all social ranks, of all religious creeds, meet and come in sympathetic touch. Different views and different ranks are taught to live in peace with each other.

A democracy like ours does not aim at leveling differences. There is room in it for wealth and poverty, and for every creed and every view. Democracy respects individuality which grows and thrives nowhere better than in the sunshine of liberty. But while recognizing fully the legitimate differences which a large nation with its complex economic life, its social and sectional conditions, involves, it does not consider it desirable that the classes and social ranks should get out of touch and sympathy with each other. If the children of the nation are reared in common schools

attended by the poor and the rich, by all creeds and all nationalities, public education not only secures the permanency of free institutions, but establishes cohesive bonds of sympathy and good will among all our people. The public school by becoming also the common school, is welding the whole nation into intimate spiritual solidarity and companionship. It prevents democracy from becoming a house divided against itself. In our large cities, the work of the common schools has been attended by startling results. In the city of New York, for instance, all the nationalities of the globe are represented, some of them forming colonies equal in number to a large city. The heterogeneity of language, of creeds, of social habits, is marked and permanent. Yet the children of these immigrants that enter the school ignorant of its language even, leave it at the end of a few years, devoted to our institutions and in touch with American life.

Not only to the immigrant, but to our own people, the common school is a boon and a blessing. The meeting of all classes of our children in common work is in itself of educational value and significance. They learn to appreciate the human qualities in their fellow-beings regardless of social distinctions. The end of school days brings with it a parting of ways, but a bond of fellowship has been established through common schooling which softens the harshness of the demarcation lines of life. Education in a democracy requires common schools for the people. The distinction between the idea of the public school and that of the common school will appear perhaps more clearly by reference to the public schools in German cities. An excellent system of instruction is found there, and the schools are public to the extent that they are supported and maintained by the state and municipality. But they are not common schools.

There are in each city public schools of various grades with courses of study that differ in regard to advancement and the kind of studies taught. There are schools in which foreign languages are part of the curriculum, and others in which the boys begin the study of the classics when they have reached their tenth year. In other schools, again, the course is simple and does not go beyond what we include in the ordinary elementary curriculum. The various public schools of the German city differ among themselves in kind, and the parent must decide what sort of education his child is to obtain and select some school to fit his idea. In each of the city schools of advanced standing a tuition fee is charged, and as a consequence the selection depends on the wealth and standing of the family. Those boys that are to have a college education at a later time are trained in separate schools.

This brief explanation will show that while these institutions are public schools, they are not common schools in the sense of

our definition. The classes and social ranks separate at an early time, and public instruction becomes, in a sense, class education.

The state has created the public school; in making the public school also the common school, the teacher has largely co-operated, because the question of where the parent sends his children is largely determined by the convenience of the buildings and excellence of the instruction. The way to make the public schools the common schools was to make them uncommonly good, and in improving the schools and in winning for them the appreciation of the people, the teacher has had a large share.

It is of the highest importance for our democratic institutions, which require mutual good will and the sympathetic touch of the masses, that there should be common schools.

School Instruction in a Democracy.

The question arises as to whether the instruction in the common schools of a democracy should be or can be adjusted so as to serve specifically the purposes for which the schools are maintained. At a first glance, it might very properly be said that instruction is subject to pedagogical considerations only and cannot be modified to serve political ends.

There is no democratic road to arithmetic. Geography, penmanship, and the study of science, are the same, no matter under which form of government they are taught. Moreover, the best way to educate good citizens is to train good men and women.

Yet, while instruction in the schools of a democracy must comply with the general method which rational teaching follows everywhere, it is nevertheless true that in some respects it may be adjusted to the great purposes of the state. If democracy depends on the dissemination of intelligence, if it is desirable that the citizen, when new issues arise, should be able to inform himself through the printed channels of information, there is no study in the school that is of greater importance than reading. If the schools did nothing else than to impart to the child the ability to read with ease they would thereby render good service to the state. The ability to read makes his mind accessible to the influence of the thinkers and writers of the day. The newspaper can talk to him every day. The library is open to him. He becomes interested in the issues which he must help to decide, and his judgment is enlightened.

The ability to read is not identical with the possession of intelligence. There have been very intelligent persons who were unable to read. The ability to read does not in itself make the thoughtful citizen, but the ability to grasp and assimilate the subject-matter of the printed page ranks among the best training which intelligence can receive. It is the task of the school to pay special attention not only to the mechanism of reading, the cor-

rect and fluent pronunciation of the words, but to form, from the very beginning, the habit of thoughtful reading. There is no better training of the child's intelligence than the constant practice of questioning a class on the lesson they have read. The questions should not only serve the important purpose of enriching the child's vocabulary by making the language of the lesson his own by his use of the words of the book, but for the still more important purpose of leading the children to draw inferences and to exercise their judgment. Instruction in reading, besides cultivating intelligence, should engender a love of reading. Inclination to read and enjoyment of reading should become qualities of the child's soul. The love of good books should be the treasure which he carries with him from school when he enters life.

During the last two decades important service has been done to education by connecting the work of the public library with the school and inculcating habits of serious and thoughtful reading. The child learns how to obtain books, an art which is useful to the grown man. Reading the newspapers is of importance, but it should be supplemented among intelligent people by the reading of books. Man's education extends from the cradle to the grave. First, the family takes hold of him. Next, the school supplements the family. When school ends the forceful education of life begins. The newspaper becomes a potent daily influence which extends beyond the political guidance and instruction which it gives to the reader. The newspaper, besides discussing politics, relates to us every morning the events in the social life of the community and the country. It helps to bring the people of all classes into that touch with each other, which is so important in a democracy, where the interests of one are the interests of all. Even this semi-gossiping part of the daily paper has an altruistic tendency which gives to each reader a glimpse at the world at large and an interest in the life of others.

The subject matter of the reading lessons in the public schools affords many opportunities to hold up civic virtues and noble human qualities before the young minds, to fill them with admiration for the great men of the nation and to lead them early to an appreciation of our institutions. Selections in the reading books that are capable of teaching civic duties or of rousing patriotic sentiments should be utilized with special educational skill. It used to be the practice to defer instruction in history until the child reached the highest grades of the elementary course. The fact that a large percentage of children leave the school before they reach those grades, entails that they never receive instruction in the history of their country. This is a bad practice. While formal instruction in history may not be possible in the primary grades, it is quite feasible to teach the elements of history through the biography of some of our national heroes. More-

over, there are easy historical stories written for little children, which should be used for supplementary reading. No matter how early children are compelled to leave school, they should have some knowledge of the history of their country.

In the highest grades, the constitution of the United States is studied. It used to be the practice, and in some places it is the practice still, to commit it verbatim, and in answer to the teacher's questions to recite its sections from memory. Fortunately this practice has been superseded by a better method. It laid stress on the words sometimes to the neglect of the meaning. There is no better opportunity to give to the young minds a glimpse at the wonderful structure of our political organization than to grasp the meaning and thought rather than the words. It is of course easier to lead children to repeat the words of the constitution than to make them understand the meaning of its leading features, but the latter is the worthier method in the schools of a democracy.

Recitations.

Aside from the influence which special studies have, the general form of the school work may be made to promote the ability to obtain information by one's own efforts. The school may be so organized as to impart skill in the use of sources of information and to cultivate a certain independence of thought. In European countries and in Eastern cities the whole room as a rule forms one class and recites together. Much can be said in favor of the other plan, of having two classes in each room. This arrangement of the program prevails in many cities of the West. Where the whole class recites together it is constantly dominated by the personality of the teacher. The pupil is not left to himself sufficiently long; he is not made habitually to depend on his own resources. Where there are two classes in each room, one class studies its lesson while the other recites. The pupil has a chance to do something by himself. He is left to his own initiative. He is freed for a half hour from the intellectual control by which his mind is made to keep step with others. For a time he sets his own pace, and thinks his own thoughts. He learns how to obtain through thoughtful reading information of which he must give an account later when he recites. He is placed in the same position in which he will find himself in later years when he tries to obtain information from books. His school experience trains him for life.

The recitation of the lesson itself gives important training. Each child is in intellectual touch with his class and joins them in common work. He learns to listen to the reasoning of others, to reason himself, and to present his reasons intelligently. I believe that American schools give greater scope to connected topical

recitation than is given elsewhere, and that the readiness of the average American to speak in the meetings which he is called on to attend is a direct result of this training.

All instruction should tend to develop individuality, but it is an error—frequently met, even among teachers—to suppose that when children are instructed in classes, individuality is lost thereby. Many believe, erroneously, that it would be better to instruct children singly if time allowed, and that instruction by classes is but a makeshift resorted to because the other way is too expensive. Just the opposite is true. There is no way of developing character and individuality except by touch and contact and intercourse with our fellow beings. Intellectual or artistic talent, says the poet, may develop in solitude, but character and individuality grow only in the stress and struggle of life. Just because the child meets his equals in the school and works and competes with them will his individual traits unfold and become refined and ennobled. Selfishness is suppressed and altruistic motives are cultivated. Teaching children in classes develops individuality. Let us discard the pernicious idea that teaching is a pouring-in process, and consists of nothing but the storing of the mind with information which the teacher presents and the pupil remembers. In instruction it is not the teacher's activity, but the activity which he causes in the pupil that counts. The response alone which the child makes to instruction is of value. Education depends on what the child does with the instruction that is presented, the trains of thought that it engenders in him, how he interprets and assimilates new information, how he is able to express it and what he will do with it in life. The highest pedagogical skill is displayed not in the more or less brilliant way in which the teacher presents knowledge, but the response on the part of the children which she is able to bring about. The child's response to instruction, however, depends on the individuality of the child himself. There are not two in a class that study a lesson alike, to whom it means the same thing, or who recite it the same way.

Individuality is irrepressible. It will be promoted strongly by class recitation if the teacher gives enough freedom and elbow-room to the mental activity of the child and judges a recitation or an answer, not from the standpoint that it must conform with the answer she herself has in mind. The teacher must enter into the child's own way of thinking.

Discipline.

The discipline of the school if rightly conducted imparts civic training. Valuable civic habits may be inculcated and strengthened, such as the habit of obedience to law, the habit of self-government, the habit of self-regulated, orderly conduct, of re-

spect for the rights of others and of good will. These are of general human as well as of civic importance. When the little child enters the kindergarten he learns his first important civic lesson. At home his position was unique, for the youngest child is the royal person round whom the love and attention of the whole family center and whose wish is law. When thrown into touch with other children in the kindergarten he learns very soon that his will is not supreme since he lives in a little community where others have equal rights with him.

In the primary grades the child must learn to respect thoroughly the teacher's authority, because it is essential that habits of order be formed. The little child must learn to do what he is told without an obligatory lengthy explanation of the "why" and "wherefore" of the order. Obedience to law can not be made to depend on each individual's approval of it. But gradually, when the habit of obedience has been acquired, the teacher's authority must be made to appear as the power which carries out the law of the school and the generally recognized rules and usages of proper conduct. When the child has arrived at the age when he can understand the reason for the habits of order which he has formed, constant appeals may then be made to the child's good sense and the discipline of authority changes into the rule of law. The little misdemeanors of learning childhood are then treated not as offenses against the authority of the teacher, but as encroachments on the rights of the other children. Whispering is improper, not because the teacher has prohibited it, but because the other children have a right to be free from unnecessary and willful disturbance while they are at work.

The wise teacher will remember that too much government is as bad in school as it is in the state. Lack of discipline and order in a school room is bad, but too much discipline is worse. An air of individuality, of rational freedom, ought to prevail in a well-managed room, and there is nothing more charming for an educator than to visit a room which seems to run itself, where good order and intentness upon the work prevail, all seemingly due to the earnestness of the pupils, without any apparent effort on the part of the teacher. All glory to such teacher; it is all her work any way; it is the response which her character, her good judgment, her incessant labor has brought about, which alone counts in education. The air of that freedom which fills the land and in which the children must live their lives must permeate the school room as well.

SCHOOL EXTENSION AND ADULT EDUCATION.

By HENRY M. LEIPZIGER.

There is one creed to which we all subscribe, and that is our belief in the necessity and importance of education for all. Not only republican America, but monarchical Europe recognizes the power of public opinion, and this deference to public opinion is the triumph of democracy. How important is it then that public opinion be sound and sane and that the democracy that exercises this power should wield it in obedience to lofty and pure motives!

The most potent agent in the spread of education among the people is that nineteenth century product, the public school; and in the brief time that I shall occupy, I shall speak specifically of the marvelous extension in the conception of the school that has taken place during the last generation, and in making references, shall necessarily be confined to what has gone on in New York. Many other cities have special advantages or have made special school experiments which have been more or less successful; but it is my desire to call the attention of this audience to what has gone on in school extension in New York City and to indicate the path along which all cities should go to make their schools the most perfect citizen-creators possible.

Fully to appreciate the problem, it may be well to call your attention to the fact that the City of New York has on its rolls to-day, in round numbers, about 600,000 pupils; that it has a staff of about 13,000 teachers; that the school population represents all the diverse elements that form our heterogeneous city; that in some portions of this city the population is so dense that practically children may grow up therein with but a limited knowledge of nature; and that the task of educating this vast conglomeration presents a social problem with which no other city of the world has to contend. And, while the solution of this problem is far from being attained, it is well to observe that the spirit and the desire are present gradually to give New York the best that can be given.

The extension of the school has gone along three main lines. The school curriculum has been broadened. Thirty years ago, what are known as the staples of education, the three R's, formed the main themes of instruction. Rote learning was the custom—repetition of facts learned from books seemed to be the "be all" of education. The hand and the eye were little used as means of educational power. The late General Francis A. Walker, head of the Massachusetts Institute of Technology, in describing the school of his youth, says: "I entered the schools of Massachusetts at five years of age and left them to go to college at

fifteen. In all the interval, I do not remember ever to have been set to any study or exercise which I could not have done just as well if born without hands, except solely for the convenience of holding a book and turning over its leaves, or of writing on paper, slate or blackboard; or which I could not have done just as well if afflicted with total blindness."

How different in the school curriculum of to-day, when the theory is being put into practice that "the whole boy must go to school," and that the hand and the eye and the heart and the head must be trained! Therefore, in the modern school curriculum, there is included provision for the means of acquiring knowledge and expressing it; provision for the study of nature and of history and of literature; provision to give the child the use of his hands; and provision, I am glad to say, for physical development. It seems as if the wise ideal of the present school curriculum is to prepare the children who attend school "for life—not merely for examinations"; and that the educational system at any time in vogue must adapt itself constantly to the social and industrial conditions of the time or of the place. In every city, while it is desirable that there should be uniformity in studies so as to secure for every child the just minimum to which he or she is entitled in order to become an upright and an honorable citizen, yet opportunity should constantly be afforded for adjustment to conditions which may prevail in different sections of the city, so that the needs of any particular locality may be provided for.

The extension as indicated in the curriculum is further shown by the character of the schools which now form a part of the great educational system of our metropolis. Eight years ago, there were no high schools in New York City. The city has maintained a college, formerly known as the Free Academy, since 1853, and now as the College of the City of New York, and is erecting new buildings for this college at a cost of about \$5,000,000; and a Normal College for the training of teachers since about 1870; but there were no high schools until eight years ago. There are now about twenty-one, including branches, and these include two commercial and four manual training high schools, one of which is for girls. It is certainly gratifying to note the recognition of manual training. Too much appreciation can not be given to the value of manual training as a moral agent as well as an educational factor; and if in a course of education the studies engaged in by the pupils, besides their educational value, have a relationship to home or to life, then so much more valuable are those subjects. Instruction in art, which is becoming more and more general, and instruction in domestic science, in a city so large a population of which lives in the tenement, constitute one of the most valuable features of the extension of school life.

As an indication of the appreciation of the fact that the high schools have met a common demand, is the fact that there are about 18,000 pupils in these high schools, and the majority of the scholars in these schools are girls. It is well to refer here also to the avidity with which young women of our city avail themselves of the opportunities of education. It is indeed true that the privilege of education is one which should be afforded equally to man and to woman. It is not always, however, that the privilege of education has been recognized as a right for women.

In the good old New England days, in the Hopkins Grammar School in New Haven, there was a rule that "all girls should be excluded as improper and inconsistent with such a grammar school." When, in 1766, the town of Medford did grant the privilege, how did it do it? It voted that the committee have power to agree with the schoolmaster to instruct girls two hours a day after the boys are dismissed. In 1790 this resolution was passed in Gloucester, Mass.: "That the school shall be open eight hours daily, and that two hours daily shall be devoted to the instruction of females, as they are a tender and interesting branch of the community, but have been much neglected in the public school in this town."

The errors of the past are rapidly being atoned for by the granting of the most liberal opportunities for the education and the training of women. A noted American educator has said: "Educate all the men of the generation and leave the women uneducated, and every child under their influence begins his public education with all the disadvantages of his father. Educate all the females, and you will have a permanent impulse to the onward movement of the race which it can never lose."

Special colleges for women, co-educational institutions, and the opening of professional schools to women, all indicate that the day of darkness for women has passed away, never more to return. The only danger would now seem to be that the desire of women for education is so great that some fear that the student bodies in higher institutions may become over-feminized. In the high schools of this city, of the 17,000 pupils, 10,000 are girls. In a number of colleges women already outnumber men.

At the other end of school life, the most gratifying indication of school extension has been that of the kindergarten. To-day there are more than four hundred of these delightful, these democratic, and these natural introductions to school life, whose educational importance is becoming daily more recognized as one of the most wholesome extensions of our educational system.

The extension of the school's use in both these ways, upwards by the establishment of high schools and downwards by the establishment of the kindergarten, is by no means the limit of the school's extension. That the school duty is not complete when

it provides for children alone of the school age is now being recognized by the establishment of evening schools which afford opportunity to those whose education has been limited or to those who have come to our shores after the school age, or to those who, being compelled to work, still desire to continue their improvement. A system of evening schools and of evening high schools, three of which are for women, indicates this extension.

The chief item, however, in public school extension, to my mind, lies in the appreciation, on the part of the public, of what a teacher should be. The most important functionary in the proper state of civilization is the teacher. He or she it is that takes the child in his formative period and shapes it and moulds it for the future. For good or for ill, the teacher is the most effective social worker. How do we, in this country, in this rich age, and in the time of our greatest prosperity, regard the teacher? I take the following statistics from the latest annual report of the United States Commissioner of Education:

"There are 16,000,000 pupils attending the public schools of this country. Thirty years ago 39 per cent of the teachers were men; at present, 26 per cent."

Is it desirable that the teaching force of the country be so largely feminine? Is not teaching a virile occupation? Is not the training of the child's mind as worthy of the fine intellect as well as the child's body? Perhaps the compensation given to teachers may tell the story. From the same report, the average monthly compensation for men teachers in the United States is \$49.98 per month, and the average monthly compensation for women is \$40.50. It is true that in the City of New York and other cities a higher rate of compensation prevails, and it is to the credit of New York City that the salaries paid to teachers do fairly attract trained men and women, so that they can be afforded the opportunities of culture and travel; but New York is an honorable exception. We may boast of our organized school system and of our great school buildings, but in the last analysis, the foundation of the educational arch is the teacher. President Garfield said that if you put Mark Hopkins at one end of a log and a pupil at the other, you have a university. In the State of New York, which employs about 40,000 teachers, less than 5,000 are men, and the average annual salary for teachers in the City of New York is about \$1,000; in the towns of New York about \$350. A state will then only be civilized when it recognizes the true dignity and the true worth of the teaching profession.

Within the last fifteen years the attention of the people has been drawn to the fact that the school house was a plant costing a large amount of money, but occupied for practically less than half the time. With the constantly increasing population, and with the inadequate places for gathering, it seemed as if so limited

a use of so costly a plant was not justified; and with the appreciation of the additional problems of education, additional uses to which the school house shall be put were devised. Among the most notable of these was the establishment, about five years ago of the vacation schools. Prior to that time a private corporation, the Society for the Improvement of the Condition of the Poor, spent a small sum in providing vacation schools. Their value became impressed upon the educational authorities, and now the beneficent influence of these vacation schools reaches thousands. During the summer but a limited number of the denizens of our city can afford to leave it, and the daily influence of the school being withdrawn, the children, whose only playground is the street, rapidly run chances of deterioration. The vacation school takes these children, utilizes their energy, directs their thoughts away from school routine, gives them a love of nature, takes them on excursions, employs their minds on wholesome reading and their hands in works of art and skill, directs their play and looks after their physical development; so that, when the autumn returns, and the school doors are re-opened, they enter upon their school life refreshed and happy, almost equal to those who have had the good fortune to go to the seashore or to the mountains. The extension of the school house then so that it shall be used all the year round, just as now some of our great universities are open, is a great advance.

Following upon the extension of the use of the school house for vacation schools, is the development of the school house as a social center. But a limited number attend the evening schools, and after a day's work the desire for social intercourse is strong in most human beings. Shall that desire be for what is low or for what is uplifting? Shall the intercourse be coarse or shall it be refined? What better place for the education of the social side of the human being than in the school house? This thought has led to the use of many school houses as play centers and recreation centers, where formal instruction is but a minor feature, but where refined games, gymnastic exercises, literary clubs, music clubs, etc., exist and are encouraged; where civics is practically taught; and where the beginning of delightful, real, genuine refined intercourse is made possible. Under careful supervision, and a proper spirit animating the workers, it would seem that the time might come when the social settlements which prove so efficient now as moralizing and uplifting agencies, might come to an end, and that each school house, wherever situated, might become such a settlement, for each school house should be a center for educational, and recreational, as well as instructive purposes.

The extension of the use of the school on the lines to which I have referred has, in the City of New York, been even further broadened. It is believed that education is required not alone as

a means of livelihood, but as a means of life; and that as Bishop Spaulding says, "The wise and the good are they who grow old still learning many things, entering day by day into more vital communion with beauty, truth, and righteousness."

It is the belief in this theory that has led the City of New York to include in its conception of the school a provision for adult education. Its underlying principle is that education must be unending. The city's prosperity and growth depend on the intelligence of its citizens, and as we have come to realize that the child is of supreme importance, so have we also arrived slowly at the conclusion that he, who from necessity has remained a child in education, needs continuous instruction.

A librarian once told me that a young reader came into her library and said he wished a book entitled, "How to Get Educated and How to Stay So." He unconsciously spoke a great truth. It is one thing to get educated; it is another to stay so. The school gives the beginning of education. Provision for adult education is necessary to enable us "to stay so." Of the school population of our land, about 3 per cent attend high schools, and less than $1\frac{1}{2}$ per cent the colleges, universities, and professional schools. The great body of our citizens have but limited education; and the very persons best fitted to profit by education and who need it most are in most cases denied its beneficent influence. Two classes are especially in need of it; first, those between 14 and 20 years—the time of adolescence, when conscience is disturbed and when character is being formed—at that time all the safeguards of true culture must be around youth; and then there is a large class of mature people who have a knowledge of practical life and who appreciate the value of education most keenly. It is from such a class that our students—I call them that rightly—of electricity, of physics, of history, are recruited. A lecturer on physics wrote to me the other day: "The questions put to me by my hearers were, as a rule, more intelligent than are asked in many a college."

Sixteen years ago the Free Lecture Movement was tentatively begun in New York in six school houses. The total attendance was about 20,000. During the past year there were 140 places where systematic courses of lectures were given by 450 lecturers, and there came an attendance of 1,155,000. The growth indicated by the figures which I have just quoted must lead to the conclusion that this democratic movement for adult education is appreciated by a constantly increasing body of our citizens. The large number who have attended this year prove that the appetite for instruction on the part of the people has not been appeased, but that, like all good things, appetite comes with eating. As a rule, we should not boast of mere bigness; but the fact that in the City of New York, including as it does all sorts and condi-

As an indication of the appreciation of the fact that schools have met a common demand, is the fact that about 18,000 pupils in these high schools, and the scholars in these schools are girls. It is well known to the avidity with which young women of our day avail themselves of the opportunities of education. It is the privilege of education is one which should be made available to man and to woman. It is not always, however, that the privilege of education has been recognized as a right.

In the good old New England days, in the High School in New Haven, there was a rule that "all females were excluded as improper and inconsistent with the character of a school." When, in 1766, the town of Medford voted to grant the privilege, how did it do it? It voted that the schoolmaster have power to agree with the schoolmaster to instruct females a day after the boys are dismissed. In 1790 the town of Gloucester, Mass.: "That the schoolmaster instruct the girls eight hours daily, and that two hours daily shall be given to the instruction of females, as they are a tender branch of the community, but have been much neglected in a public school in this town."

The errors of the past are rapidly being corrected by the granting of the most liberal opportunities for the training of women. A noted American educator has said: "Educate all the men of the generation and leave them to educate, and every child under their influence will be educated with all the disadvantages of his father's education; educate the females, and you will have a permanent upward movement of the race which it can never have otherwise."

Special colleges for women, co-educational colleges, the opening of professional schools to women, the day of darkness for women has passed away and is returning. The only danger would now seem to be that of women for education is so great that some of the student bodies in higher institutions may become entirely female. In the high schools of this city, of the 17,000 pupils, 15,000 are girls. In a number of colleges women already outnumber the men.

At the other end of school life, the most gratifying feature of school extension has been that of the kindergarten. There are more than four hundred of these kindergartens in the city, and these natural introductions to the public school system of educational importance is becoming daily more and more important. The most wholesome extensions of the school system are the kindergartens.

The extension of the school system is being accomplished by the establishment of high schools, the establishment of the kindergarten, and the extension of the school system. That is

it provides for children alone of the school age is now being recognized by the establishment of evening schools which afford opportunity to those whose education has been limited or to those who have come to our shores after the school age, or to those who, being compelled to work, still desire to continue their improvement. A system of evening schools and of evening high schools, three of which are for women, indicates this extension.

The chief item, however, in public school extension, to my mind, lies in the appreciation, on the part of the public, of what a teacher should be. The most important functionary in the proper state of civilization is the teacher. He or she it is that takes the child in his formative period and shapes it and moulds it for the future. For good or for ill, the teacher is the most effective social worker. How do we, in this country, in this rich age, and in the time of our greatest prosperity, regard the teacher? I take the following statistics from the latest annual report of the United States Commissioner of Education:

"There are 16,000,000 pupils attending the public schools of this country. Thirty years ago 39 per cent of the teachers were men; at present, 26 per cent."

Is it desirable that the teaching force of the country be so largely feminine? Is not teaching a virile occupation? Is not the training of the child's mind as worthy of the fine intellect as well as the child's body? Perhaps the compensation given to teachers may tell the story. From the same report, the average monthly compensation for men teachers in the United States is \$49.98 per month, and the average monthly compensation for women is \$40.50. It is true that in the City of New York and other cities a higher rate of compensation prevails, and it is to the credit of New York City that the salaries paid to teachers do fairly attract trained men and women, so that they can be afforded the opportunities of culture and travel; but New York is an honorable exception. We may boast of our organized school system and of our great school buildings, but in the last analysis, the foundation of the educational arch is the teacher. President Garfield said that if you put Mark Hopkins at one end of a log and a pupil at the other, you have a university. In the State of New York, which employs about 40,000 teachers, less than 5,000 are men, and the average annual salary for teachers in the City of New York is about \$1,000; in the towns of New York about \$350. A state will then only be civilized when it recognizes the true dignity and the true worth of the teaching profession.

Within the last fifteen years the attention of the people has been drawn to the fact that the school house was a plant costing a large amount of money, but occupied for practically less than half the time. With the constantly increasing population, and with the inadequate places for gathering, it seemed as if so limited

As an indication of the appreciation of the fact that the high schools have met a common demand, is the fact that there are about 18,000 pupils in these high schools, and the majority of the scholars in these schools are girls. It is well to refer here also to the avidity with which young women of our city avail themselves of the opportunities of education. It is indeed true that the privilege of education is one which should be afforded equally to man and to woman. It is not always, however, that the privilege of education has been recognized as a right for women.

In the good old New England days, in the Hopkins Grammar School in New Haven, there was a rule that "all girls should be excluded as improper and inconsistent with such a grammar school." When, in 1766, the town of Medford did grant the privilege, how did it do it? It voted that the committee have power to agree with the schoolmaster to instruct girls two hours a day after the boys are dismissed. In 1790 this resolution was passed in Gloucester, Mass.: "That the school shall be open eight hours daily, and that two hours daily shall be devoted to the instruction of females, as they are a tender and interesting branch of the community, but have been much neglected in the public school in this town."

The errors of the past are rapidly being atoned for by the granting of the most liberal opportunities for the education and the training of women. A noted American educator has said: "Educate all the men of the generation and leave the women uneducated, and every child under their influence begins his public education with all the disadvantages of his father. Educate all the females, and you will have a permanent impulse to the onward movement of the race which it can never lose."

Special colleges for women, co-educational institutions, and the opening of professional schools to women, all indicate that the day of darkness for women has passed away, never more to return. The only danger would now seem to be that the desire of women for education is so great that some fear that the student bodies in higher institutions may become over-feminized. In the high schools of this city, of the 17,000 pupils, 10,000 are girls. In a number of colleges women already outnumber men.

At the other end of school life, the most gratifying indication of school extension has been that of the kindergarten. To-day there are more than four hundred of these delightful, these democratic, and these natural introductions to school life, whose educational importance is becoming daily more recognized as one of the most wholesome extensions of our educational system.

The extension of the school's use in both these ways, upwards by the establishment of high schools and downwards by the establishment of the kindergarten, is by no means the limit of the school's extension. That the school duty is not complete when

it provides for children alone of the school age is now being recognized by the establishment of evening schools which afford opportunity to those whose education has been limited or to those who have come to our shores after the school age, or to those who, being compelled to work, still desire to continue their improvement. A system of evening schools and of evening high schools, three of which are for women, indicates this extension.

The chief item, however, in public school extension, to my mind, lies in the appreciation, on the part of the public, of what a teacher should be. The most important functionary in the proper state of civilization is the teacher. He or she it is that takes the child in his formative period and shapes it and moulds it for the future. For good or for ill, the teacher is the most effective social worker. How do we, in this country, in this rich age, and in the time of our greatest prosperity, regard the teacher? I take the following statistics from the latest annual report of the United States Commissioner of Education:

"There are 16,000,000 pupils attending the public schools of this country. Thirty years ago 39 per cent of the teachers were men; at present, 26 per cent."

Is it desirable that the teaching force of the country be so largely feminine? Is not teaching a virile occupation? Is not the training of the child's mind as worthy of the fine intellect as well as the child's body? Perhaps the compensation given to teachers may tell the story. From the same report, the average monthly compensation for men teachers in the United States is \$49.98 per month, and the average monthly compensation for women is \$40.50. It is true that in the City of New York and other cities a higher rate of compensation prevails, and it is to the credit of New York City that the salaries paid to teachers do fairly attract trained men and women, so that they can be afforded the opportunities of culture and travel; but New York is an honorable exception. We may boast of our organized school system and of our great school buildings, but in the last analysis, the foundation of the educational arch is the teacher. President Garfield said that if you put Mark Hopkins at one end of a log and a pupil at the other, you have a university. In the State of New York, which employs about 40,000 teachers, less than 5,000 are men, and the average annual salary for teachers in the City of New York is about \$1,000; in the towns of New York about \$350. A state will then only be civilized when it recognizes the true dignity and the true worth of the teaching profession.

Within the last fifteen years the attention of the people has been drawn to the fact that the school house was a plant costing a large amount of money, but occupied for practically less than half the time. With the constantly increasing population, and with the inadequate places for gathering, it seemed as if so limited

help in the assimilation of the newly arrived foreigner, lectures have been given in Italian and Yiddish on subjects that relate to sanitation and to the preparation for American citizenship.

The lecturers are recruited from the very best educators available. Our lecturers include the professors in our universities, the traveler, the journalist, the physician, the clergyman—in fact all who have knowledge to impart and the power to do so; and the fine spirit that characterizes our teaching force is worthy of emulation by all who are engaged in the noble work of education. It seems to me that no more honorable, and perhaps more difficult task, can be placed in the hands of a teacher who stands before audiences, such as gather in our school houses, for I know of no more sacred task than that of a teacher in a democracy, organizing as he does public opinion, directing reading, and inspiring for the higher life. The ideal teacher in a scheme of adult education, as some one says, must combine with the university professor's knowledge, the novelist's versatility, the actor's elocution, the poet's imagination, and the preacher's fervor.

Adult education as practiced in New York combines the best elements of university extension and reaches the working people of the city. It has been the means of realizing the belief that scholarship must go hand in hand with service, and that the duty of the university to the city and the state is to lift our citizens to higher ideals.

The influence of the lectures on general reading is illustrated by the report from one public library, concerning which the librarian writes:

"The register shows an increase of 321 members during the course of the winter lecture season, of which a large portion consisted of those who had first heard of the library in the lecture hall. As a result, the people select their books with more care and forethought, having something definite to ask for and on a subject in which their interest was aroused. A stimulus was created which led to more intelligent reading. You can not expect all the people to appreciate and thoroughly enjoy a book until they know something akin to that subject and until their enthusiasm has been aroused."

This is what I feel the lectures are doing for those who have not had a school course. The platform library forms an integral part of the lecture movement. As the libraries do not possess sufficient duplicate copies of any particular book, there are loaned out to those who attend the courses, the leading books that are mentioned on the syllabus which is distributed with each course of lectures; and the circulation of these books bespeaks the intelligent pursuit of the subject in hand.

The movement of adult education not alone gives a new interpretation to education and the teacher, but a new type of school

house which is to be open not only for a few hours daily, but at all times, and to be a place not alone for the instruction of children, but for the education of men and women; so that there should be in each modern school house a proper auditorium, with seats for adults and equipped with apparatus for scientific lectures, and for proper means of illustration.

There should be no necessity for citizens, desiring to add to their culture, sitting in the low and ill-ventilated and unattractive school yard or climbing sixty or seventy steps to sit upon a bench intended only for children. So a change in the construction of our school houses may result from the expansion of this use. The newer school houses built in our city contain such auditoriums; and the extension of the school for these varied purposes makes the school house what it really should be—a social center—the real, democratic neighborhood house. That we are approaching such an ideal may be inferred from the fact that some of the school houses in the crowded districts are open on Sunday. If the museum and the library are open on Sunday, why should not the school house, too, be open on Sunday and in its main hall the people be gathered to listen to an uplifting address of a biographical, historical, or ethical nature?

It seems to me that the tendency should be to include in public education all that is best in the movements of philanthropy which mark our time. The interest of churches and philanthropic societies in our work is shown by the constant offering of church and other halls gratuitously for Board of Education Public Lectures. The church surely approves of spreading the gospel, "Let there be light."

The unification of a great city is furthered by a system of public lectures. It is not brought about by the mere building of bridges. In a great city, neighborliness does not often prevail, but a community of ideas brings people together; and when last year it was resolved to celebrate the 250th anniversary of the founding of New York as a municipality, it was celebrated not by a military parade or a monster banquet, but by a series of illustrated lectures and open air exhibitions of the great development of New York City. About 100 such lectures were given, illustrating the history of the City of New York—thirty of them in public parks. As New York is the pioneer in this work of adult education, so is she the pioneer in this peaceful method of civic celebration.

The provision for adult education emphasizes the fact which now, more than ever, should be emphasized in our American life—that men are not old at 40. Dr. Osler, deserving of so much credit, has certainly done a great public service in awakening discussion on the question of the period of man's mental decay. What is needed in America, it seems to me, is more, not less,

reverence for age; more, not less, recognition of the fact ~~that~~ though there may be a climax to man's bodily development in early manhood, his mental development should be continuous, and as President Eliot says, "His last years should be his best." Scientists tell us that the brain of a man between 50 and 60 is at its best, and even at 60 the acquisition of knowledge may well be begun.

The history of the world of the past and the present day is full of illustrations of the activities of old men, and no one has put it better than Longfellow in these words:

"But why, you ask me, should this tale be told,
To men grown old, or who are growing old?
It is too late! Ah, nothing is too late
Till the tired heart shall cease to palpitate.
Cato learned Greek at eighty; Sophocles
Wrote his grand *Iphigeneia*, and Simonides
Bore off the prize of verse from his compeers,
When each had numbered more than four-score years;
And Theophrastus, at four-score and ten,
Had begun his 'Characters of Men.'
Chaucer, at Woodstock, with the nightingales,
At sixty wrote the 'Canterbury Tales';
Goethe, at Weimar, toiling to the last,
Completed 'Faust' when eighty years were past.
These are indeed exceptions, but they show
How far the gulf stream of our youth may flow
Into the arctic regions of our lives,
Where little else than life survives."

Summing up the value of this movement, it may be said that it brings culture in touch with the uncultured; it gives a new meaning to the uses and possibilities of the school house; and not alone adds to the stock of information of the people, but furnishes them with ideas. In these days of shorter hours and larger opportunities, the toilers will find in adult education the stimulus for the gratification of their intellectual desires and a larger world is given them in which to live. The best characters in literature will influence them, their daily labor will be dignified, new joy will come into their lives from this association with science, literature, and art; and they will find that true happiness does not come from wealth, but from sympathy with the best things in art, and with the love of nature.

The public school is becoming recognized throughout our country as the most efficient form of training for intelligent democracy. Despite the criticisms of the public school, the constant trend of the morale of the American people is upwards due to its influence, and if the public school has failed to become the absolute panacea that the idealists would desire, is it not largely because of the failure to provide for education sufficient funds to bring about the desired results? The public school should occupy the most beautiful building in the town, and the teachers

in the public school should be men and women of the finest intelligence, the highest culture, and occupy the highest social position. When such conditions prevail, when popular appreciation indicates that the highest service that one can perform is in the service of teaching, then indeed will the public school become what the vision of the dreamer would have it realize. The public school building of the present day, architecturally beautiful, with improved sanitation, with provision for physical development, and with its auditorium for lectures, is in a fair way toward bringing near that ideal, so well described in the words of Mr. Page: "We must make the public school everybody's house before we can establish the right notion of education. It unites the people and they look upon it as the training place in which everybody is interested, just as they look upon the court house as the place where every man is on the same footing."

We, who engage in this work of education, are imperialists, but our empire is the empire of the mind; for we believe it is the mind that makes the body rich. We are expansionists; but we desire the expansion of opportunity for all men to live the true life. We believe in the open door; but it is the open door to the school house to which we refer. We should make it not alone a nursery for children, but a place of intelligent resort for men and women; and we are democrats in believing with our honored president, that though education never saved a nation, no nation can be saved without it.

MANUAL TRAINING.

Abstract of the address given by HENRY M. LEIPZIGER.

Dr. Leipziger said that expositions had materially helped educational progress as well as industrial advance. The first international exhibition in London in 1851 was in a large measure responsible for the provision for art and technical instruction which marks Great Britain's educational system. The manual training movement in the United States really dates from the Centennial Exhibition of 1876. Through the attention there directed to the system of tool instruction exhibited by the Imperial School of Moscow, Russia, St. Louis and Boston established the first manual training schools in the United States. The expositions did not originate the manual training idea; they called attention to the need that was beginning to be felt in the educational world.

During the last thirty years both the curriculum and methods of teaching have been criticised and the greatest problem of the time, What shall be taught to our children? is beginning to be rec-

ognized as a subject worthy of statesmen. The belief is spreading that what we wish to put into a nation's life must be put into its schools, and further, as Professor Woodward so tersely expresses it, "the whole boy should go to school."

There are intellectual, economic, physical and moral grounds for the value of what is called manual training. The school instruction of the past laid undue stress on language expression. Children do not go to school merely to learn facts, but to be trained how to learn, how to think, how to help themselves. The basis of elementary manual instruction is laid in the kindergarten, therefore the kindergarten teaching self-activity is so valuable a feature of elementary instruction. Things and nature, as well as books and words, should form part of our educational curriculum.

The school curriculum should be related to life, and not merely to examinations. Living as we do in an industrial age, and the majority of the workers of the land being engaged in distributive and productive branches, that is, manufacturing, agriculture and commerce, the pupils in our schools should in some way be prepared for these important activities. The eye and the hand are such important aids in intellectual development that the training of these important members should form part of every natural system of education. Shall the schoolmaster exercise in writing only, the member on which the Creator has lavished so much skill? Drawing and tool instruction should be included in every school curriculum. Besides the disciplinary value of manual training, it will impress many of the pupils in the schools that it is as dignified to engage in the fields of industry as it is to enter the professions. The boy who can use tools has a power which will enable him to get along in life better than he who is ignorant of their use. The fact that the schools teach something utilitarian will do much toward encouraging parents to keep their children in school as long as possible. The appreciation of the value of practical instruction may be illustrated in the New York public schools. There are several high schools, but the most popular are the manual training high schools for boys and the technical high school for girls. These schools do not turn out artisans, but they combine instruction in what are known as the liberal arts, with knowledge of the processes of commerce and the application of science and art to industry. The advocates of manual instruction believe thoroughly in the value of literary instruction, but advocate that in a complete and harmonious education, art and industry must, too, be recognized. Domestic science should form part of the curriculum in girls' schools. The study of fire, food, clothes and health is particularly the province of woman.

Manual training will prove a valuable agent in the upbuilding of moral character, and how to give moral training in our public

Schools is the subject which is now foremost in the minds of the leading educators of our land. Statistics, it is said, show that a large part of the criminal classes are young men who have had no industrial training. "Satan finds some mischief still for idle hands to do."

Mr. Froude says, "The three R's of no industrial training has gone; along with them are apt to produce a fourth R of raciality." Our country particularly should have the most liberal curriculum and all varieties of schools. Rich as our country is in its natural resources, now that it has definitely entered into the international arena, it enters into the field of commercial and industrial competition; and to maintain its high rank it must rely on the brains of its citizens as well as on its resources. As we have learned much from Germany in the realms of higher learning, we can profit, too, by a study of its wonderful system of education which has for its object the training of each unit in its national life for the highest efficiency. Germany in many respects is in the lead in many industrial lines. This lead is due to the application of scientific knowledge and educational methods to all departments of human activity. In the city schools, as well as in the rural schools, provision should be made for trade schools, technical schools and farm schools, and the result would be the increased intelligence of our people—greater prosperity and greater happiness. The manual training movement, broadening as it does the term education, should attract to the cause of teaching many of the ablest minds and secure both higher appreciation and higher remuneration for the teacher. As President Roosevelt said recently, "The teacher is the most important functionary in our social life."

THE PROBLEM OF THE RURAL SCHOOL.

By J. H. ACKERMAN.

It shall be my purpose to discuss the rural school problem as it is presented in Oregon today. The graded school has its problems, but in my opinion they are at this moment far less urgent than those presented by the rural school, and this must serve as an excuse for devoting a period of this Congress to the conditions and needs of the many one-room country schools, where more than half of the children of the state must receive their elementary schooling—all that most of them ever get.

These country children are in most respects happily situated. The beauties of nature smile upon them and her magical voices call to them in the solitude of field and farm. They have a healthful environment. The example of virtue and honor in

the home and the community is in the main before them. Duties many and continuous await them, and their labor is devoted to definite ends. They have time for quiet reflection and opportunities to use their reason and judgment. Their environment well suited to develop a strong body and an active, vigorous mind. No class of our youth gives greater promise of usefulness. For the most part these children are well born. They have good bodies, with senses acute, nervous systems capable of responding to outside impressions, untainted blood, good digestions, capacities.

These children have a right to healthy, well-trained bodies, to the judgment and direction of intelligent parents, or guardians, to cheerful and helpful surroundings, to the best intellectual, moral and industrial training that the age affords, to membership in happy homes; in short, to everything comprehended in the words "education" and "training." They should have a better chance to enter upon and enjoy a fuller and richer life than any preceding generation of children ever had. These country children deserve and have a right to demand school privileges in every way equal to those accorded to the children of towns and cities.

That the school privileges of the present accorded them are not equal to those provided in the graded schools of our towns and cities cannot be questioned by anyone at all familiar with the facts. It is conceded by all students of education that the conditions in the country schools are not today what they should be for the proper preparation of the country boys and girls for American citizenship. These conditions are wretched; ill-kept, poorly-furnished, and inadequate school buildings, surroundings the most depressing, the schools too small to present conditions for successful work, teachers deficient in experience and scholarship, frequent change of teachers, poor classification, and the school year more than one month less in the average than prevails in towns and cities.

It is not intended to convey the impression that there are not rural schools well housed, with trained, experienced, progressive teachers, and with teaching equipment entirely adequate, nor that there are not some localities whose pupils attend with a reasonable degree of regularity for a reasonable number of years. We are not unmindful of the fact that there are many country schools superior to some graded schools, and I hasten to say that not all teachers in the rural school are with little or no experience and of meager education. Some of our best teachers labor from choice in the country. Then, too, it often happens that the young teacher with her first school in a remote country district does work of the highest merit. I am persuaded that much of the teaching done in the schools under consideration will bear favorable comparison

with the best teaching in our cities. No teacher who labors in the country need apologize for the fact; neither should she feel that the work given her to do is of less importance than that undertaken in the more pretentious city position. Nevertheless the fact that some country schools are doing good work only proves what may be done in all country schools where right conditions prevail. It is for such conditions that we are pleading today, and the number of such schools is not so large as to eliminate the rural school problem.

The rural school teacher has so many disadvantages with which to contend, cold rooms, at times inconvenient boarding places, many grades, including many classes, short terms of employment, smaller salary than the city teacher, and few social pleasures and opportunities—all these tend to make the vocation of the rural school teacher undesirable. No wonder that we find the personnel of the rural school corps changing almost entirely once in every three years. While this state of affairs obtains, it will be well nigh impossible to secure a class of well-trained, fully developed, rural school teachers. In the good time coming, the rural school teacher will receive as much per month for as many months in the year as the city teacher, and the rural school will demand equal talent, experience and preparation.

Am I asking too much for the country school when I so prophesy? If so, may I ask what crime the country boy or girl has committed which shall deprive him or her of just as good school conditions as is afforded the city boy or girl? I hold that it is the right of every child to make the most of himself, to the development of his God-given faculties by education; and that it is the duty of the state and of the community to give him this chance by providing adequate means for his education. It is the divine right of every child to have this chance, a right as inherent as his right to breathe God's free air and enjoy God's glad sunshine. It is the civil, moral and religious duty of every state, of every community and of every individual to help to give to every child this chance, a duty as binding as the duty of self-protection, as the duty of service to God and humanity. The duty of the community to give it follows logically from the right of the child to have it.

Of all the imperfections enumerated, the country schools suffer most from the frequent change of teachers. Most of the teachers employed in the graded schools of the state are employed for the full year, beginning with the fall term, and it is the common practice to elect the successful ones from year to year. This practice does not prevail in the country. This frequent change of teachers results in an enormous waste. No school is up to its maximum efficiency when teachers and pupils are strange. This loss is particularly great in the country school where the classifi-

cation is less perfect and where the teacher requires considerable time in which to determine the status of the individual pupils as to advancement and as to ability to work. Now, if this process must be gone through with every few months it will readily be seen that the loss to our schools from this alone is very great.

Furthermore, the country school loses in comparison to the graded school in the matter of classification. Where all the classes from six to eight grades must come before the teacher daily, the period for each recitation must be so short as to impair its efficiency. Then, too, the teacher, by giving attention to a larger number of subjects, cannot do the effective work that would be possible with her energy centered in the work of a few grades instead of so many. Again, the classes in fully three-fourths of our country schools are exceedingly small, containing in hundreds of instances but one pupil. In such instances all the instruction becomes individual. Such a condition is unfortunate for any school. While individual instruction should never be precluded, there is yet a value in class instruction that is lost to the pupil who must recite by himself. Children learn from one another. In a class of pupils there is the contact of mind with mind. The spirit of emulation is awakened. The interest is sustained and advance is more rapid.

As I have previously hinted, until the conditions are changed, the work of teaching a rural school will simply be used as training for village and city schools, or as stepping stones to other vocations. This new country with its manifold opportunities offers too many tempting chances of steady employment at fair wages to permit a bright young man to go on year after year holding a seven months' position at \$35 or \$40 a month.

In view of these conditions, I believe that any unbiased mind will concede that so far as school privileges are concerned, the country child is placed in comparison with the city child at a great disadvantage in that a smaller per cent of his teachers are trained and experienced; he must suffer the annoyance and loss incident to frequent change of teachers and in social privileges because of the prevalent small school; he often loses the inspiration of numbers in his class work; his school year is shorter and he has no high school privileges in his home district. Considering these facts, no one, I think, will deny that we have a rural school problem in Oregon.

One day last spring a great longing came over me to visit once again my old school and look again into the faces of the boys and girls to whom I had bidden goodbye some years ago; but when I came to realize that nearly every child had, in the natural course of events, passed out of the school, and that none would be left to greet me, a feeling of loneliness and responsibility came over me. Loneliness, on account of the absence of my young

friends, and responsibility when I fully realized that I could not lift from my shoulders the weight of personal responsibility which has rested upon them while performing the duties of my present position. I somehow had never before had brought to me so vividly the realizing sense, that during that time not only the children of that particular school, but a whole generation of children had entered and passed through the elementary schools of the state. I felt that this educational work could not be postponed. It must be done now or forever go unaccomplished. It cannot wait until the mortgages are paid, the houses built, the factories established, the orchards and vineyards planted, and the streets paved. It cannot wait until poverty has been annihilated, drunkenness cured, public officials made incorruptible, the heathen Christianized, or right views of the public finance instilled into the minds of all citizens. No, the period of growth is the period of culture, and if this generation is to be educated, moulded, trained, it must be done while the minds and bodies are plastic. Any other interest of society can wait, but the high tide of educational opportunity comes but once to each generation. This doctrine is old and universally accepted. I am speaking platitudes; but we are not yet acting in accord with our belief. If these children were Hambletonian colts there would be no question of their successful development into fleet and sure-footed racers; alas, they are only boys and girls.

It is often deliberately stated that because admirable results were developed in the exceptional individual in the old school with its lack of system and its infinitely irregular courses of study, our modern school, so carefully systematized, offers no improvement. That the method of the old school, or lack of method, would be today impossible is self-evident. Times and conditions have changed. The country grocery of a past age could not successfully fill the place the department store occupies at the present time. The public school system without the system would fall to pieces. As a matter of fact, the school system is here, it abides, it is a fixed institution, yet in a way it changes, takes on new form, and gradually assumes new prerogatives. Years ago, Horace Mann said: "When anything is growing, one former is worth a thousand reformers." This, applied to the schools of a state, bears with it deep significance. It is the truth. The school system of any state is a growth. It is a development, an evolution. From decade to decade and generation to generation the school system is changed as new needs and duties arise. There is ever present the elements of adjustability and change. Fundamentals remain, non-essentials pass away.

No nation or individual has ever become great without a high ideal. That the founders of our rural school had a high ideal there is no question. That we have not attained that ideal

is equally true. Still we should ever be found holding fast to that which is good and constantly reaching out for better things. This is what thousands of teachers are doing in this broad land of ours, and all honor should be paid to them; but it is necessary that we know just what we are trying to secure as a result of our work; hence, the necessity of discussing again and again such questions as we have before us today. I contend that we have made progress. The courses of study of today, with all their faults, are vastly better than the meager courses of generations ago. The rural school is fighting for its proper place in the line of battle. I have presented, and I believe without exaggeration, some of the weaknesses that cripple the efficiency of many of our country schools. A wise and liberal policy on the part of school boards will remove some of the weaknesses. The schoolhouse may be made attractive, the surroundings made beautiful, the length of the school year increased, and *one* teacher, and she a competent one, employed for the full year. But some of the weaknesses I have depicted are inherent, and will not be removed unless radical changes are made along certain lines. In suggesting changes, I fully realize that it is much easier to be destructive than constructive, and methinks I hear some one say that the conditions are only too true, but what remedy have I to suggest.

In proposing the remedies I have ever striven to remember that the present rural system is the result of many a hard-fought battle on the part of its friends; to remember how little one could do in the ordinary course of a lifetime in organizing and perfecting a new system, should every vestige of the present system be so obliterated that there would be no remembrance that such a thing as a school system ever existed; hence, a person ought to be humble and hesitate to criticize unless he knows full well that he could evolve a better one.

As partial remedies for these inherent weaknesses, the following are suggested: First, the consolidation, where practical, of school districts and the transportation of children to centers; second, a modified course of study for rural schools, eliminating certain parts prescribed for city schools, and providing for the introduction of work, especially in the elements of agriculture and of domestic science, and such further lines of industrial education as local conditions may make feasible; and also providing work with reference to meeting the needs of the children in rural communities and not with reference to preparing a small percentage to enter higher schools whose courses of study are formulated not to meet the demands of a great majority attending them, but to prepare the remaining small minority to enter some still higher school; and, third, prohibiting by legislative enactment any person from teaching a rural school who has not been spe-

cially trained for rural school work in accordance with such a modified course of study as I have just indicated.

It is safe to say that no other educational question of organization and administration has been given equal consideration with centralization of rural schools, during the past five years. The National Educational Association watches with deep interest the solution of the problem of consolidation of rural schools and transporting pupils at public expense, now attempted in many of our leading states, and for which we, in our own state, have recently received legislative sanction. We believe that this movement will lead to the establishment of district and county high schools, and thus bring more advanced education to rural communities. Under the system proposed the farm becomes the ideal place to bring up children, enabling them to obtain the advantages enjoyed by our centers of population, and yet to spend their evenings and holidays in the country, "under the constant, tender care of father and mother, in contact with nature and plenty of work, instead of idly loafing about town."

Consolidation will often logically and properly center about towns and villages. Contact of the country boy with his rugged manner, straightforward honesty, plodding habits of persistent industry, with the boy of the city, molded by its cultured society and its atmosphere of taste and refinement, may be valuable to both. However, in the illustration here taken it is not intended to consolidate about a village. To provide better school facilities by consolidation, it is intended to conserve and broaden country life, to make it distinctly more dignified, more honorable, more lucrative, and more attractive; to educate toward it, not from it. In such a school the social life of the children is undenied, the circle of acquaintance is extended, classes are larger and there is the contact of mind with mind that is absent in the class of one pupil. And, finally the teacher is permitted to concentrate her energies on a few grades instead of teaching them all; to have comparatively few recitations instead of many, and to have twice as much time for each recitation as in the school where the whole range of classes must come before her. Many people have the impression that consolidation means the abandoning of country schools and the transportation of the children to cities and towns, where they are taken into an entirely different environment. But the consolidation I am contending for contemplates nothing of the kind. I believe the school environment in the country is in many ways superior to that in the city. I want the country school to remain in the country, so far as possible, but I want it large enough for the employment of from two to five teachers, and with no teacher in charge of less than twenty-five nor more than thirty pupils. Such a school organization might cost the people more in dollars and cents, hence, the possible saving

in money is not the ground upon which the change is urged. The end of consolidation is to get better schools and to multiply the benefits to the children. Consolidation commends itself to our favor because it offers the opportunity for proper classification, for the assignment of a reasonable number of pupils to the teacher, for regular and punctual attendance, and, hence, for a vast increase to the pupils of the benefits the school can bestow.

The small school serves but few people, and is supplied by the taxes raised on a comparatively small amount of property. Neither the public interest nor the financial support is, therefore, likely to be such as to encourage the development of the school. While advancement is noted all around, in every business and every department of human endeavor, the little country school is likely to conform very closely to the type of school of a past generation. But unite the interests of a large number of people in the school, bring to its support the taxes on a larger aggregation of property, and better conditions will be speedily and easily secured. Union and co-operation alone will make possible the twentieth century school. We may project the nineteenth century school into the twentieth century, but the school that keeps pace with the times and meets the demand of the age, must have the interest and financial support of many people and the services of a number of skilled teachers working in co-operation.

With the consolidation of districts, in time will come good roads, improved carriages and wagons, telephonic communication, the daily paper, rural free delivery. These all annihilate distance and bring the people of a community nearer together than they were under more adverse circumstances in the old-fashioned district. Ours is a progressive age. We are constantly called upon to remove a blind allegiance to memorials of the past, and to stand for the attainment of that which is in harmony with the present and which inures to our future good. The initiative in the matter of country school consolidation, if taken at all, must be taken by the people in the rural communities. The change, therefore, cannot come suddenly. All the difficulties in the way, and there are difficulties, must be carefully weighed, the local conditions in each community consulted, and the benefits of the proposed changes proven to the people beyond dispute before the little districts will be abandoned and the larger school units established. I am glad this power rests with the people, for though changes sorely needed may be delayed, when they come they will be abiding and will have, each of them, the support of the people and will bespeak intelligent direction by the people. We should accept the situation, make use of our opportunities, and success will eventually attend the effort. "Everything can be moved if we touch the right spring," and "adapt the means to the end."

The relation of the rural school to the farmer is an important one. The rural school gives, or should give, vitality to farm life as directly as food nourishes the body. It is the controlling, moulding influence that shapes human life. It ought to fit farmers for their duties as men and as citizens; and with the present light of science to guide the school in the country in our day it ought to do more than this. It ought to fit men in some degree for their occupation as agriculturalists. If the country school is to fulfill its mission to its community as the handmaid of agriculture, it must be different from the town school. It must be a school adapted to the needs of the community in which it is. Until recently, to the shame of our nineteenth century scholarship, be it said, no effort at adaptation of rural education to the needs of the people has been made in country schools. All minds and all tastes have been forced into one mould of education. Country children have been treated as having but few needs. The farmer's needs are varied, most important, most urgent. To meet these he must have the advantage of the best schools, and the best schools for him are the ones that teach him the things that he needs to know. What does he need to know? What are the farmer's educational needs? As a man and a citizen, his needs are precisely the same as those of other men and other citizens—fully as great—no less. He must be taught the things that other citizens find it necessary to know—to read, to write, to compute. The studies to meet these needs are well defined and for the most part are fairly taught. As an agriculturalist, his needs have not been so well understood. He is dealing with the natural world. His enjoyment and his livelihood depend upon his understanding the laws that control in the natural world. He must, therefore, know nature. The studies adapted to his needs in this respect can scarcely be said to be taught at all in the country schools. I have said that he deals with natural things. Obviously, therefore, he ought to be instructed in these things, and hence, elementary agriculture should form a part of the course in rural schools, if they are to meet the educational needs of the people who surround them—the farming people of the state. Can this be done? Yes; but there must be an elimination from the present course of all non-essentials—all that has become obsolete—all that is not essential to fit him for his environment. This does not mean that certain subjects shall be omitted, but that the subjects themselves shall be pruned of all dead matter, so to speak. This can be very properly and profitably done in the subjects of arithmetic, history, grammar and geography.

The objection to the introduction of elementary agriculture at the present time is the inadequate preparation of teachers along this line. The same condition existed at the time drawing and

music were introduced, but where the demand was created the proper preparation was made. A favorite scheme of mine is to arrange the rural schools in groups and assign a teacher of agriculture to each group—a teacher who is a specialist, who could go from school to school in his group, as the specialist in drawing, music and physical culture goes in the city from building to building and from room to room. What a world of good could be accomplished; how the beauties of nature would grow on the minds and hearts of pupils in such schools when directed by a well-trained teacher. For a laboratory he has all the world at hand. May I again ask, is not the country boy and girl entitled to a special teacher for his or her special calling as is the city boy and girl? Such a teacher could have a vehicle to convey his apparatus from school to school, which reverses the city method in that it moves the apparatus from class to class, instead of moving different classes to the apparatus. Do you call the scheme Utopian? It is entirely practicable. Do you shudder at the cost? Well, that is something; but not nearly what you may imagine. Oregon is good tenting ground for such a radical advance, and I believe the rural districts are ready for it, notwithstanding it would mean the uprooting of many hoary prejudices.

The question of industrial education in rural schools has been a live one in the deliberations of the National Educational Association. So much so that on July 6, 1903, the following resolution was unanimously adopted:

"Resolved, That the National Educational Association be requested by the board of directors of the National Educational Association to appoint a committee to report to that body, after such investigation as may seem desirable, conclusions as to what should be undertaken in the field of industrial education in schools for rural communities, and to recommend such an appropriation as may be necessary for carrying on the investigation and preparation of this report."

This resolution resulted in the appointing of a committee and an appropriation of \$500 for a committee of five to investigate and report to the council upon the subject of industrial education in schools in rural communities.

I can do no better in concluding this phase of the discussion than to quote the general conclusions reached by the committee as reported to the National Council of Education at its July meeting, 1905, and also to refer you to the committee's argument for industrial education in schools for rural communities. The general conclusions reached by the committee may be summed up as follows:

1. That in existing one-room district schools a limited amount of nature study and work in the elements of agriculture, and hand-work for both boys and girls may be undertaken; that

in view of the quality of the teaching force available for these schools, the immaturity of the greater number of the pupils, the crowded condition of the programme, and the lack of adequate supervision, but little can be expected in the way of industrial education in this class of schools; but where enthusiastic teachers qualified for the work, and pupils of sufficient maturity are brought together in the same school, something worth while may be accomplished, and that the effort for such accomplishment should certainly be made.

2. That in the consolidated school having at least four teachers, one of whom is prepared to teach the elements of agriculture and manual training, and another domestic science, very much more in the field of industrial education may be attempted than in the one-room school, and with far better results. The committee believes this to be true, because in such schools teachers may be secured with far better qualifications than are possessed by most of the teachers in the one-room schools, and because in many cases pupils will remain for one or more years after completing the elementary school course, during which time the work in industrial education may be continued. In the consolidated school district, in most cases, new buildings must be erected. At small expense rooms may be provided for manual training and domestic science work, and a plot of land as a part of the school grounds set apart for illustrative and experimental work in agriculture. While the committee does not wish to enter into any argument in favor of consolidated schools for other reasons than for the facilities they may afford for industrial education, it wishes to endorse most heartily that portion of the report of the committee of twelve on rural schools, concerning the advantages of the consolidated school.

3. That in the township or other distinctly rural high school, and in the village high school attended by a considerable number of pupils from the country, a modification of courses of study should be made which shall provide for the introduction of work, especially in the elements of agriculture and domestic science, and such further lines of industrial education as local conditions may make feasible. To make this work a success, teachers must be secured who have made special preparation for it. For such schools a text-book treating botany from an agricultural and economic standpoint is greatly needed.

4. That while the agricultural or industrial high school is found in but few localities, the character of the work already done in the existing schools of this class, the interest they awaken, and the hearty support they receive from the agricultural communities maintaining them, the history of these schools in foreign countries, the value of their work both for disciplinary and practical purposes, all combine to present the strongest rea-

sons for the organization of schools of this type in large numbers, in agricultural communities. So thoroughly is the committee convinced of the importance of industrial education in rural communities and what is essential for making this education effective, that in their opinion the establishment of secondary schools distinctly industrial in their character and of the type mentioned, is an absolute necessity for the proper development and organization of the rural school system.

5. That the agricultural colleges and experiment stations have already done much in the formulation of a body of knowledge essential in the field of industrial education, but that more yet remains to be done in putting this body of knowledge into visible form for use in elementary and secondary schools; and that effort in this direction should be made a prominent feature in the work of the agricultural colleges of the country.

6. That the mastery of such parts of this rapidly developing body of knowledge as is within the capabilities of elementary and secondary school pupils, furnishes a mental training unsurpassed in extent and quality by the mastery of any other body of knowledge now regarded as essential in our common school courses and requiring an equal amount of time; and that for utility value it is not equaled by any other body of knowledge at present acquired through the expenditure of the same amount of time and effort.

7. That for the improvement of educational conditions in rural communities, the people in those communities must be educated to see and appreciate the possibilities and value of industrial education; that the value of this kind of education in increasing the productive capacity of those being educated is the argument which appeals most strongly to the rural population. Therefore, in the beginnings of industrial education in any community, immediate, practical results that will appeal directly to the interests of the people who support and maintain the schools must be made prominent by those concerned with its development.

8. That it is possible and desirable so to organize the rural school system as to present an articulated series of schools from the elementary school to and including the agricultural college, in which the work at every stage shall be planned and administered with reference to the needs of the pupils at that stage without the elimination of any valuable feature in the present school system, and without abridging in any way the opportunities for advancement of such pupils as wish to enter other schools of secondary or higher grades.

9. That in industrial education, as in every other form, the success of the work depends upon the quality of the teaching; and that therefore, since effort for industrial education in ele-

mentary and secondary schools is comparatively recent and teachers have not prepared themselves in this field, special opportunities and inducements must be offered to the teaching force to make the necessary preparation.

The rural schools are instructed by teachers who for the most part are young girls and women bred in our cities and villages and educated in graded schools. These young women, it is true, carry with them into their fields of labor the culture and refinement of the cities; and yet they know but little about the home environment of the children they teach. They themselves have been educated for life in the congested centers of population, and the ideals they nurture in their pupils, the hopes and aspirations they stimulate, will be for the most part, the ideals, hopes and aspirations that will attract their brighter pupils to the cities for their realization and fruition. These teachers do not care to read and become interested in agricultural and horticultural literature. Farm life has for them no attraction. They are looking forward, as I have said, to the cities for the fruition of their hopes, and their pupils will become, as a result of the contact with their teachers, restless and discontented with the farm life and environments.

It is to the normal and agricultural schools that the rural schools will have to look, more largely than they have in the past, for qualified teachers; and when our normal schools shall recognize this need of specially trained teachers in rural districts and shall have set about to meet and supply this demand, then will the normal school problem be effectually solved, and the normal school will have found its true mission.

Under the old plan of education, our schools, from bottom to top, influenced the movement of the people from the farm; but not towards the farm nor towards better farming, not away from the "man with the hoe" idea. The old philosophy was to educate a man first and then make a specialist of him. The other extreme which has had more advocates and more devotees was to choose a specialty and bend all the powers in that direction from early youth. The happy medium is best brought out by the agricultural school where, as in the farm home, the watchword is mix industrial work and manual training with school education. Our industrial schools are revolutionizing education, utilizing literary culture in a practical way and making the science useful to the life of a community as well as qualifying them for science's sake. Our agricultural and mechanical schools are solving, have solved, some of the largest pedagogical problems of the age. Here are the basic elements of a new philosophy of teaching, and the one who first analyzes and interprets it in written form so as to make it generally useful will have added a valuable element to our pedagogical literature. The achievements in these matters are

new, their fruits are crude, and not as yet collected in a complete system. But the leaven is working and there is reason for the most optimistic faith.

Teachers must, then, be interested and instructed in a way of thought and in the methods of leading the youth of the schools under consideration into utilizing the things of the farm and the farm home as the basis of investigation and thought. Experimenting in teaching, like inventing a new device, will result in many failures, but soon successes will accumulate into a pedagogical system which can be used to great advantage by all teachers who are interested in this line of work.

But, after all has been said, our schools, wherever found, will never be much below what the people demand, and if we had archangels for superintendents and teachers, and angels for school directors, the schools would never be made much better than the people want. Hence, one of the greatest problems, after all, is the proper education of public opinion. A man need not always make a martyr of himself by standing out in advance of his time; the average man is not called upon to do that, and he has no right to destroy his usefulness by insisting upon what is now impossible. We may learn a lesson in this respect from Abraham Lincoln, who, for a while, allowed public opinion to lead him, but when the time was ripe stepped forward to the head of a movement of progress and led it to the accomplishment of his purpose.

The growth of the rural school system supplies material for a remarkable, a fascinating, even a patriotic and glorious story. No other great people ever gained such splendid educational conception for the masses, for an unlimited education for every son and daughter of the people. No other great people ever attempted to provide schools for every rod of such wide and sparsely settled territory as ours. No other great nation in the world has builded an educational system upon such plans, so flexible, so adapted to the national life. And it has not been done by a monarchy, or by a ministry through the use of dictatorial powers, but by millions of the great liberal people, moved by the highest motives, acting through primary meetings, and then exercising sovereign powers through representative and responsible assemblages.

One of the creations of this common power is our unique system of popular education. American schools have from first to last reflected American economic and political conditions. The schools have advanced with the growth of the nation and the progress of civilization. They are much better housed, they do much better work, they are more scientifically taught than in primitive days, but it was far easier for the early schools to meet the demands of their day than for us to see the tendencies of these seething times and meet the claims of the multitudes who are waiting

upon us. Yet we may by united, persistent, well-directed effort, lay our hands on the rural school, the school of the masses, this safeguard of society, this stronghold of the nation, and raise it to a higher and broader plane of usefulness than it has ever occupied.

HIGHER AGRICULTURAL EDUCATION.

By E. A. BRYAN.

In a singularly progressive educational age, no phenomenon has been more striking than the rise of the American agricultural colleges. A half-century has seen many achievements in education. It has seen the overthrow of blind subservience to authority, the establishment of the doctrine of academic freedom, the advent of the natural and physical sciences into the college curriculum, the realization of an organized system of public schools, the rise of the high school, and the emergence of the great state universities. But none of these movements has been more radical or far-reaching or virile than the establishment of the land-grant colleges and the system of education springing therefrom. The word "agricultural," used in this connection, is generic and not specific. It characterizes that entire system of education inaugurated with the establishment of the land-grant colleges—a system which was a protest against and a revolt from the theory of exclusively literary education and an acceptance of the fundamental doctrine of scientific and industrial education.

I need not recite the history of this movement, for it is a familiar page of modern history. Some forty great colleges and universities endowed with large and increasing funds, equipped with splendid laboratories, shops, and farms, each provided with a great corps of investigators and teachers, filled to overflowing with students, exemplify the new doctrine and attest the greatness and success of the movement, even at this early stage. The movement has reached other and older institutions, modifying their curriculum and methods. It has reacted upon science itself, shifting the incidence of scientific investigation and wholly modifying the method of science teaching.

Repeating history in that the movement of educational forces is from above downward, the doctrine and the system are extending to the normal schools, the high schools, the elementary, and particularly the rural schools. The farmers' institutes, the farmers' reading circles, the university extension work, and the agricultural experiment station correspondence (which, by the way, is the biggest correspondence school in the world) have become powerful agencies in the agricultural education of these members of the community who have passed the school age.

Omitting for the present the discussion of the new viewpoint for scientific study which is involved in the movement, omitting the realm of the mechanics, arts, and other industrial phases which are an essential part of the movement; omitting manual training, which is identical in the fundamental principles involved, and turning to the specific use of the term agricultural education, it may be pointed out that agricultural education, as it exists today, is quite another thing than that looked for by the educational theorists of a quarter of a century ago. It is equally contrary to the hopes and speculations of many "practical" men who championed the establishment of agricultural schools. That great statesman, Senator Morrill, guided, as it were, by instinct rather than by dogma or theory, "builded wiser than he knew." He initiated the legislation giving rise to the agricultural college movement with a wisdom and a breadth and a truth surpassing that of the pedagogical theorist, or the utilitarian who was his contemporary. The word agricultural as describing the new institution is generic rather than specific. It stands for a system of education rather than training for a specific occupation in life. It aimed at, to use his own words, "the liberal and practical education of the *children of the industrial classes* (and in America that means most of us) for the *several pursuits and professions of life*," and it suggested many ways and means whereby "agriculture and the mechanic arts," the great twin agencies in production, might likewise be agencies in an educational system, and that, too, without excluding the many useful existing agencies for education.

The Morrill act of 1862 was a protest and a proclamation. A protest against the narrowness and idiocy and baleful tendencies of the existing regime in college education, and a proclamation of freedom therefrom.

I say Senator Morrill was wiser than the philosopher or the practical man of his day. The "practical" man thought that the system should confine itself to the teaching of processes and formulae and recipes. It should begin with the commandments—the "Thou shalts" and "Thou shalt nots" of agriculture. Stress was to be laid upon the part which the body was to perform in agricultural work. The president of one of the agricultural colleges of the early day told me that the practice in his college was to find out, when a new boy came, what he could do. If he knew how to build a fence, he was put to fence building; if he knew how to milk cows, then he was set to milking cows. The "practical" man had great fear of science study. Not that he wholly eschewed science; on the contrary, he had a profound, a superstitious reverence for science. He always spelled it with a big "S"—if he could spell. He approached science as one of olden time would have approached the oracle or the witch's cave.

Scientific dicta were cherished as the Knights Hospitalers cherished a piece of the wood of the true cross, or the bones of a saint. Should the deliverances of the scientists upon occasion conflict with the undeniable facts in the case, then he was simply no scientist at all—a false prophet. But for the agricultural student to *study* science, that was quite another thing. A little of it might not hurt, for these tremendous words had a new and strange and wonder-working sound, as though they were words to conjure with, but too much of science might bewitch him, and then he might not farm. Our “practical” friend had a profound fear of anything that did not smell of the cow stable, and an insane jealousy of any subjects which could not be described as agricultural, as he understood it. He consented to the inculcation of knowledge, such as the scientist and practical man might put down in the form of facts and rules, after the manner of the almanac. Along with this he was willing that the student might have any amount of bodily training which might be deemed necessary, provided he didn’t learn too much, for it was almost a tenet in certain quarters that the student should be kept ignorant enough so that he would be compelled to farm, and thus the end of the system be attained. His premises assumed that agriculture is a science, that is, that there existed an accurate and complete and systematic body of knowledge known as the “science of agriculture,” and a perfect system of practice, both objective entities of which the student might become possessed. With proper application he might learn them both. Now, I need hardly interpolate that there existed then no such body of knowledge nor any such system of practice, and even if they were true, for today, they would not be for tomorrow, and even if he swallowed the one and clothed himself with the other, a little later he would be as helpless as ever. One of the most serious obstacles with which agricultural education has met has been this same assumption on the part of the public that there exist a ready-made and perfect science and an art of agriculture which any one with reasonable application might get possession of for his own.

The educational philosopher of the day, on the other hand, did not have a very much clearer or more adequate view of the matter than the “practical” man. Devoted as he was to the discovery of a philosophy which explains and sustains the existing literary system, he listened with ill-disguised intolerance to the plea for agricultural education, consenting that there might be a need for instruction in agriculture, and agreeing that there was a remote academic connection between the primary sciences and the art of agriculture, but denying in his heart the name of “education” to this instruction. He agreed with the “practical” man that the learning of agriculture was a learning of processes and formulae and recipes and practices. He likened it to learning

a trade, and, to his way of thinking, the learning of trades was remote from education. Agriculture was an objective thing to whose laws and practices man must conform himself. The man must "Orientalize" himself, to use President Wheeler's phrase, and adapt himself to a fixed science and art. Of course, in so far as the so-called "agricultural education" was learning to farm, it might be *useful*, for some must learn to plow and to mow, to reap and to sow, but there was great fear that the plow and the scythe and the reaping hook might do for him what the hoe did for that poor man who stands over yonder in the famous picture. They lyingly tell us that the hoe is the author of that stupid, ox-like gaze, that low, dull brow, that heavy, hopeless body. I tell you nay, that bright, keen, beautiful weapon, the hoe, mightier than the sword, has been and is the instrument of peace, the instrument of plenty, the instrument of conquest of the earth by man, and it is rather the symbol of civilization and enlightenment than of intellectual degeneracy and death. Against oppression and tyranny, against ignorance and superstition it has uplifted man, has exalted him infinitely more than sword and crown and king. But pardon the digression.

The educational philosopher, I say, agreed with the "practical" man as to the program for agricultural instruction, but denied to it the name of education. "For education," said he, "is a thing of the mind, of spirit, and not of body. It is an inner movement wherein the mind of man rises and expands and develops strength and power. The mind through the study of language and logic and metaphysics and poetry rises above the gross and sensual to the contemplation of 'pure soul' and the highest life."

Now, the new education had little room for "pure soul" to range up and down in, and there is little wonder that some apprehension was felt lest this "instruction in agriculture," seemingly so innocent, might not, as a matter of fact, prove harmful to "real education." Great fear came upon them all because of the danger to "pure soul" from contact with earthly things, from utilitarianism and from the commercial spirit—the world, the flesh and the devil. The danger from using the common things of nature about us in our educational process must not be underestimated. If, by chance, some mind had pierced the veil and had discovered nature's laws and principles and had understood her materials; if with constructive imagination this mind had constructed a Brooklyn bridge, so that that which in the perfection of truth had been bodied forth in the mind of its creator now stands before our duller eyes as an objective reality—"Ach, mein Gott," how terrible an example of utilitarianism and of the commercial spirit is this. This bridge cost money. It makes money for somebody. Ah, how "pure soul" must have suffered under this gross commercialism. It matters not that under the old regime doctors

sawed off legs and administered pills for money, that lawyers pleaded for fees, that preachers preached for salaries, and teachers taught that they might earn an honest penny wherewith to buy bread and butter, they at least were educated under the "culture" regime, and no narrow commercialism could have blighted their innocent souls. Learning paradigm of nouns and verbs could not commercialize them; patiently with grammar and dictionary translating stupid foreign phrases into stupider English phrases could not do it; the categories of logic could not do it; the philosophy of Spinoza or Kant could not do it, and so, happily, they escaped the utilitarian spirit. But if the human mind in its educational processes shall have resorted to gross nature, shall have groveled in the dust of the earth, as it were, the commercialism of the world will cling to it like the dust. Against such opposition did the new system have to make its way. But, happily, now we are past all this, and the doleful forebodings of the educational philosopher who loyally defended the existing regime (I hope with no personal loss by reason of his loyalty), and the "practical" man, who looked to the industry rather than to the man for whom the industry exists, have been swept along with the rest of us until here we are with a great new system coming in on the high tide, and we are all saying, how little we knew, how little we guessed at the truth as we find it. The fundamental principles of the agricultural or industrial movement are all but universally admitted now. I call it the agricultural education movement, for it was the first Morrill act which gave force and vitality to the movement, and the popular word "agricultural," representing the greatest of all the productive industries, has clung to the entire system. It was this legislation that obtained entrance for the doctrine to many of the great universities. I verily believe it has been the chief source of that virility which has caused these institutions to rise like young giants as they are, rejoicing in their new-found strength. It was this, the greatest piece of educational statesmanship of the last century, that introduced into college work the mechanic arts, the engineering courses, mining and metallurgy, the applied sciences, the art and science of agriculture, domestic economy, etc., etc., and it was this that gave that dignity and vitality to manual training which it now enjoys. Right here I wish to complain of the effect of certain terminology. One of the commonest phrases standing for a multitude of things in the modern curriculum is "Manual Training." It stands for a whole conception or system of instruction, as we have heard in the past few days. But the phrase is such as to deceive even the very elect. "Manual Training"—that is, "hand training"—body training—that is the contrasting thing with "Mind" training. Now, I protest against this. I will consent to contrast the new "hand" training, with the old "mouth" training, or I will consent to the contrast of the new "industrial"

training with the old "verbal" training, or the modern "scientific" system, with the old exclusively "literary" regime. But I will not consent to any phraseology which assumes that under the old system it was "mind" education, and under the new it was "not mind" training. Even so great a friend of the cause of manual training as our good Dr. Leipziger used frequently this unfortunate contrast. He spoke of "industrial" education as contrasted with "intellectual" education, "mind" training with "body" training. There is no such distinction. The old is the "verbal" system, the new is the realistic. "Thinking" and "doing" are contrasted too strongly. All conscious "doing" is but the expression of mind. Only the imbecile and the idiot act without thought. Some of the assumptions of the old regime were perhaps natural. We think in words (mainly). They are our chief medium of communication. Through words we gain much from the present and very much from the past. They are an important and useful means of education. But how foolish we were to think of the verbal system as the only source, the only medium. How blind were we to cling to the verbal system, and the literary method, when, if we had but opened our eyes, we should have seen that it was not exclusively valid, when the larger part of our working material had been gotten in other ways. So there were words, words, words, definitions, descriptions, rules, formulae, dogmas, bookfuls of alleged scientific data, mostly false, and authority and authorities without end. It was learning—great erudition—to be sure, but not always education. The verbal system was at best very imperfect. The "word" is but a symbol after all, and through it we "see as through a glass darkly." Under the new system we "see face to face." Then we studied the representatives of things, now the things themselves. Do not misunderstand me. In defending and explaining the new doctrine, I am not declaring invalid the old system, nor even the more or less imperfect explanation of it. I believe in literary education. I believe in idealism. And I regret the imperfect vision that fails to see the idealism in the "practical" subjects of the curriculum which are so lightly sneered at. The boy does not strike the ax twice in the same place without the intervention—nay, the directing and controlling power—of mind. The reaction of every such act, so directed, upon the mind is immediate and vital. Nothing compares in efficacy with this kind of reaction. Under it the mind rises and expands and develops strength and facility as our educational philosopher required in his ideal system of education. It is absurd to require all the activities of man to be translated into words before they can be used as mental pabulum. "Education is a matter of mind?" "To be sure, it is a matter of mind." "It consists in subjective changes?" "Certainly." The old Greek poet was right. "Mind it seeth; Mind it heareth; all else is deaf and blind." But you who have labored

so assiduously to separate the consideration of the human mind from the human body must not forget that when you stand before the human eye, the mind is there; and when you speak into the human ear, lo, it is there. When the hand consciously touches you, or touches any other thing, animate or inanimate, there in the finger tips stands the mind. It reveals itself to you in the joyous or sad countenance, in the brow lit with high resolve, or pale with abject fear, in glistening eye and trembling lip, in shouts of triumph or cries of despair. So, too, through these same channels by which it reveals itself, expresses itself, it receives into its inner soul all that may come to it, and it digests and assimilates what it can, growing in size and strength and activity thereby. It is thus that play educates, thus work educates, thus all our social activities have been, are, and always will be the chief instrumentalities in the education of the race. These so-called practical subjects then are mind trainers—every one of them. The laboratory method—the method of handling things—weighing, measuring, analyzing, combining, is a mind training method. Agricultural education is education—genuine, real, education—producing mind changes, a changed being, equipped with new and useful instruments for doing things, knowing how to go at it, thinking perforce, and reasoning, idealizing, if you please, and as much as you please. The material with which the mind works is somewhat different from the old material. It cannot do, to be sure, without the same old instruments—it must read, have language and books, the science of numbers and form, etc.—but it has added new and better instruments for the purpose of mind growth along certain directions, namely, that of the life which the student is to lead.

But I have gone so far forth as to leave little time for even a glimpse at what has taken place and the present status of industrial education. Briefly, it was the rise of modern science and the scientific method that ushered in the new era. Genuine science stood a long time knocking at the door while the educator refused admission. I wish we had the word “science-taster” as we have the word “poetaster,” and then would I say that the science-taster first gained admission to educational circles. It was the man who had some knowledge of *systematic* science, who revelled in the rolling nomenclature and thought it the real thing, who loved the romantic story that science could tell, and who startled the eyes and the ears of the groundlings with the more spectacular phenomena of the science. Later the educator became more friendly to science, if so be it was only “pure.” If it dealt with abstractions and aimed at no useful end it might not engender the commercial spirit and so corrupt the youth. A school of scientists arose “who were of purer eyes than to behold iniquity,” and these sought for the truths which no

one might prostitute to a commercial end. But there came a day when some dared to say, "If, peradventure, a useful truth should emerge you would not condemn Sodom for one's sake." And the educator said, "I will not condemn it for one's sake." And then bolder men arose and said, "I will seek for useful truth. I have equipped myself with this science as a tool, an instrument; I know its elementary laws; I have the paraphernalia with which to work, and I will seek for truth that may bring betterment to mankind. I am here to solve such problems, useful to our common human welfare, as this science is capable of solving." With this stage of progress came one of the most remarkable and important pedagogical changes which we in our lives have witnessed, namely, the entering upon what I would call the "*instrumental*" stage of the subjects in the curriculum. All the while the new scientific method had been reacting upon the older subjects of the curriculum. History was revolutionized, political economy could hardly be recognized in its new form, literature felt the influence of the new method, language study was changed in purpose and uses. Strangely enough, some began to study languages in order to use them. The several sciences in every stage became "*instrumental*" to an ulterior end. They had been studied before as ends in themselves. Chemistry for chemistry's sake, botany for the sake of botany. Now they were studied to be used as tools for doing things with. Every subject began to serve as a means to an ulterior end. This is almost the most striking feature of the existing regime. But a curious result now appears from the setting of concrete problems and utilitarian ends for the scientist—and, for that matter, a similar result has come to the historian, the sociologist, the philologist, from the pursuit of the same method. The result is the story of the Holy Grail repeated. The knight-errant goes forth to seek in all climes for the Holy Grail; he finds it at his own doorway in the hands of the humble and despised. After our knight-errant quest for pure science, abstract truth, for freedom from contamination with earthly things, so the pure truth may be the guerdon of the search, lo, it appears, that in seeking through these lowly things about us, lowly ends, suddenly there emerges with startling distinctness before our vision the great fundamental principles of science. A man not far from here sought for a winter wheat that had stiff straw so that it would not fall down, close sheathed so that it would not shatter, and good milling qualities. He found it not in the Orient or the Occident. Then he said: Go to, let us create it. So he took grains, each having some of the desired qualities, and began a series of breeding experiments in which hundreds of new varieties were produced. What was his astonishment, long ere the desired end was accomplished, to see standing out before his eyes, certain universal principles of the heredi-

tary transmission of characteristics. It is thus always. The ascetic sought a holy life. Not all the scourgings and fastings and hermitage could bring perfection. The simple peasant mother bore children and trained them to obedience and thrift. She nursed them in sickness and encouraged them in health. She fed the poor and needy. She was a kind neighbor, a true wife, a good mother. She died a saint. I do not fear contradiction when I say that to solve the simple agricultural problem arising in the orchard, the garden, the field, the forest and the range, demands the highest kind of knowledge, the largest skill in technique and the broadest range of mental power. Anything less than this in the service would be suicidal. I do not hesitate to say that through these researches lies the largest possibility of the advancement of pure science. I do not hesitate to say further that of original scientific investigation today in botany, zoology, entomology, bacteriology, chemistry, the agricultural experiment stations and the colleges of which they are a part, together with the Department of Agriculture, are doing tenfold as much as all other scientific men combined in this country. I could say almost as much in the realm of physics and mechanics if I were to include with the colleges their own product.

I intimated awhile ago that so far from there being a large and well developed body of knowledge which could be called the science of agriculture at the outset, there was nothing of the kind. The data had to be gathered, and there were none capable of gathering it. Great dissatisfaction arose. The "practical" man was disgusted, and there were charges and counter-charges of bad faith. Not only the scientific data had to be gotten and a body of scientists capable of gathering and using it had to be created, but the whole pedagogy of the subject had to be invented. You may think that a little matter. But in this day when men are accustomed to say that one subject for the curriculum is just as good as another, take something which has not been used heretofore for that purpose and cast it into academic form and devise pedagogical methods for its profitable use, and you will then understand what it means to do this. To be ready to meet a class profitably in the classroom and laboratory five days in the week, four weeks in the month, ten months in the year, means much, and we now wonder at the amazing rapidity with which a practical programme has been evolved. Little wonder that in earlier days the students were few. To give no other explanation, there was little in the course that the student could use with profit. But today there is a well-considered and adequate programme. The pedagogy of the subject is in a very satisfactory condition. I have seen soil studies adapted to the simplest elementary stages of education, and to the most advanced investigations which were and are as beautiful illustrations of the scientific

method and scientific training as I have ever seen, and far better than many of the so-called sciences in the older curriculum. There is an army of the most skillful investigators of America, enthusiastically conquering the realms of agricultural science where a quarter of a century ago there was scarcely a professor of agriculture worthy of the name in America. The universities and colleges have chairs filled by able men, the very name of which will sound new and strange to many of you. What would you think of a professor of agronomy? There are many such in our largest colleges and universities. The differentiation of subjects is such that it requires a whole corps of men to teach the different departments of agriculture proper.

The growth of the agricultural colleges has not taken place without difficulty. There were those who were willing to prostitute their trusts for ulterior ends. Others were helpless by reason of their incompetency. It required creative talent in its service, and that is rare. It required time, and the public is impatient. It required students, and these had to be lured from the farm and the shop, ill prepared and with little desire on their part, and with a provision for their wants that gave little promise of satisfaction. The old educational dogmas dominated the farm as well as the city, and even to a greater extent than it did the city. Many mistakes were made. One of the greatest was due to the low and inadequate conception of the movement. A cheap low curriculum was established in many places. The objective theory was accepted by the college as well as by the public. A half-baked product was turned out, helpless among educated men, and not at home among those from whose ranks he came. There was, and is yet, the necessity without doubt of connecting up with the rural school and the rural community. But this did not necessitate the conversion of the college into a hybrid institution incapable of useful accomplishment. The move is inevitably from above downward, and the top should have been high enough. The college should have been, and should be, all that the name implies, and ordinary means of adjustment can be found for bridging the chasm between it and the elementary school.

A word as to the subjectiveness of agricultural education. The student does not learn empirically a vast accumulation of appropriate facts. Rather does he get a new attitude toward nature about him. He comes to believe that there is a rational explanation for all phenomena, a rational solution for all problems. He learns the method of solving problems, the scientific method. He applies mind to the manipulation of matter—with the usual results. We are in the stage where we assert that it is our business to educate men, not simply to make farmers. Educate men rightly by means of an agricultural curriculum and the rest will take care of itself. People are going to do what they econom-

NOT

ically must, and the method of making a living is going to take care of itself anyway. Economic considerations are going to control in the matter of occupations. What we propose to do is this: Out of the broad modern curriculum we are going to select the agricultural courses. These will include the primary sciences, of course, but the problems set in their study will be economic. Plant production, that is to say, the study of the anatomy and physiology of the plant and the adaptation of its environment to it and the study of that environment—soil, light, heat and moisture—animal production and farm management will furnish the backbone of the course. I undertake to say that under such a curriculum properly balanced with that of the literary type just as satisfactory results will be obtained as under any other, whether for practical or for culture purposes, as under any curriculum for higher education now offered. It is admitted that the mind's efficiency is greatest along the lines of its training. The activities of a mind educated under such a regime will find their greatest opportunity in agricultural production. One obstacle of old was the little demand for services of this kind at remunerative prices. Agriculture is a capitalistic enterprise, and few trained men had aught but their services to sell in the market. But it is growing different now. I predict that high service will secure a high reward here as elsewhere. I know a graduate of our own college only four years out of college who receives a higher compensation for his services alone in a purely agricultural enterprise than does the president of the college from which he was graduated.

There is, then, no doubt that the agricultural college movement which took legislative form in 1862 included the entire sphere of industrial education, and that it has been responsible for shifting the attitude of science itself as well as of broadening and rendering more adequate our educational philosophy. There is no doubt that agricultural education means the changing and developing of the human mind by means of new instrumentalities and along new lines, giving to it a new attitude toward the universe and equipping it with new instruments for the struggle with its environment. There can be no doubt that a valid system of education has been evolved and an excellent program devised for the work. There can be no doubt that this is the forerunner of vast sociological changes, that the field for educated men has been greatly extended, that the great productive realm is to feel the influence of mind in its most active and efficient form, and that as a result of this the movement has great humanitarian aspects of which we have scarcely dreamed. If we were far enough away today to get the perspective we would see that we are already in the midst of a great agricultural revolution springing directly from the new education. If the movement increased production alone it

would affect every nation, civilized and uncivilized, on earth. For every additional mouthful of bread, every additional stitch of clothing, every added necessity of life distributes itself automatically to the ends of the earth. And if we forget the effect of the new system on the men through whom these changes are wrought, yet we know that the economic betterment of other men throughout the world in turn reacts on their mental, moral and spiritual possibilities. Thus I say advisedly that the agricultural college movement was the greatest piece of statesmanship of the past century.

EDUCATION IN REFERENCE TO OUR FUTURE INDUSTRIAL AND COMMERCIAL DEVELOPMENT.

By HOWARD J. ROGERS.

The title of this paper implies the possibility of a change in school policy and methods. It is exactly the problem we have to face. There is no reason why its imminence should worry or annoy us, for it is the principle upon which the evolution and progress of men and of nations rest. It has seemed distressing to many that just as we had comfortably finished "correlating" the work of the various grades, and when we were on the verge of "enriching" sufficiently the elementary and secondary years,—so that a well-earned peace and unity might settle over the land and soothe us in their dreamy and contented embrace; a spectre should appear to disturb our rest and renew our discussions. But it is probably our salvation, for the man who rests and the nation which rests falls out of step with the world's advance. Unceasing work is the price of progress, and only those rest who die or sleep. This spirit of educational unrest seems to demand of us the reason for two main interrogations. The first we should put something like this: In view of the truth that 96 out of every 100 children in the elementary grades do *not* enter the high school, and that three out of every four children in the high schools do *not* go to a college, technical or professional school, and that only for the remaining *one* is there an opportunity to be fitted at public expense for his work in life, what should be done for the other ninety-nine to give them a fair training for their future occupations?

The second question is complementary to this and comes from the counting-room, the workshop, the factory and the field. Can you not send us boys and girls from the elementary grades, or from the high schools, with some idea of practice, and with a training to make them more efficient for work and lessen their period of instruction by us? Both are asked in the seriousness of long denial, and both must be fairly and satisfactorily answered. With the predilection of a Yankee for answering a question by asking one, Americans will say, what ought we to do, and what

can we do? Your consideration of these points is the task of the morning.

I have never seen a good definition of education in its relations to the state. Philosophers have rarely agreed upon one since the days of Grecian polemics, but it is axiomatic that the justification for the expenditure of public money on education is to increase efficient service for the state. The divisions of opinion which have characterized the policies of nations and the beliefs of men have been threefold: First, the kind of education; second, the extent to which it should be carried; third, the classes of people to which it should be accorded. Educational controversies in the United States have centered about the first two points. There never could be under our constitution any divergence of opinion on the last.

There exists also on the part of an educational system a reciprocal responsibility to the state which requires that the system produce the variety of talent demanded for the progressive needs of the state, and of the highest grade of efficiency which a trained and alert teaching service can secure. The conditions in this country have tended to create an elastic and responsive system of education. Since colonial days it has been of irregular growth, but rapid and entirely unhampered. Till late in the first half of the nineteenth century there was no uniformity in school-room methods or administrative details, but in each part of the country instruction of children was governed by the customs and traditions which were derived from the early settlers of that section. Through the storm and stress of colonial days, however, education had come to be regarded as a fundamental principle in the development of the new country, and the same theory which controlled the early development of the states and the nation may be said to have applied with equal strength to the growth of the schools, namely, equal opportunities for all citizens and freedom from tradition and precedent. Whether the schools had their origin in New England, where Puritan English ideas predominated, or in New York, where the liberal spirit of the Dutch toward popular education influenced their growth, or in the South, where the influence of wealthy landholders, with continental ideas of education for the few, had been less favorable to popular education, they rapidly acquired an individuality and rugged power which led to an incredibly swift development toward free public instruction when the appointed day arrived. The strength of the American school system has been its unquestioned precedence in the minds of the people over all other matters of administration, its careful nurture on independent bases, and the vigor with which the different forms have grown into a related system.

The characteristics which have marked our educational growth in the past are the strongest indication that it will meet

the demands of the future, viz: freedom from the trammels of creed and precedent, and a responsive adjustment to the material needs of the country. Our own educational history furnishes the most striking proof of this statement. From 1830 to 1860 a mighty force, which affected not only the public support of education, but also the character of the instruction itself, was the intense industrial life and the development of unsettled territory which followed the applications of steam and electricity. For 200 years after the foundation of Harvard, higher education had followed the time-honored curriculum, and so long as it was expected to turn out only lawyers, doctors and preachers it sufficed. But an age of material development was at hand, which has already run over half a century, and which reads like the tale of a magician. The population of the country has increased from ten to eighty millions of people; the broad acres of an entire continent have been brought under subjugation; systems of transportation bind every part of this great country in close relation; New York and Portland are no farther apart than were Boston and Philadelphia at the beginning of the period; the inventions of science in every field of human endeavor are a catalogue of wonders; the growth of applied arts to public service has become a prime consideration. The genius of man seems to have sprung forth fully armed to meet the call of opportunity. All this has demanded a variety of talent and a wealth of special training which the old institutions could not furnish, and higher education has been constantly undergoing changes to meet the demands of commerce and industry. Schools of technology and applied science have sprung up by scores; and the curriculums of the older universities have been expanded to furnish the required training. The percentage of students in higher educational institutions has increased at a ratio double the increase of the population. To put the matter briefly, it may be said that the colleges, universities, professional and technical schools, whether state supported or privately maintained, have put themselves in closer relations with the people, and are aiming to give the highest degree of practical training to their graduates.

This marvelous growth in material achievement and the correlative growth of our educational system are the distinctive marks of the nineteenth century. Changes quite as important are now taking place in the industrial and commercial world at the beginning of the twentieth century. They are the changes due to the minute applications of science to the industries, of the practical annihilation of time and space in the business world, the subdivision of labor, and the more careful observance of the principles of economy, particularly in checking waste and the prodigal use of raw material and natural resources.

A study of the commercial reports and reviews for the past five years taxes our credulity and our powers of comprehension. Royalty forms partnership with American enterprise and develops the heart of Africa; combinations of capital and labor render possible operations of an incredible magnitude and forestall failure; billion-dollar combinations are the rule instead of the million; continents are substituted for countries as fields of activity. It almost confuses our standards of reasoning and forces a readjustment of our mental perspective. There are no longer geographical boundaries to limit the operation of capital, and while political divisions will continue to exist, and various forms of government be administered for all time to come, the limitations imposed upon both by the identity of commercial interests will go far to secure the same international unity and harmony in politics as now exists in business. International combinations of capital, and co-ordinate commercial interests are the greatest peace factors of the present age. There is no millenium foretold in these words, and no white-winged dove of peace will hover over the universe till human nature has undergone a higher evolution than the last three thousand years have seen; but the control of one human passion by a paramount one is characteristic of man, and similar interests, a common liability, and a mutual opportunity for gain existing between people of different nationalities, will hold long in check animosities which might tend to destructive war.

Standards of trade and exchange are formulating in international terms and units, and it is no longer enough for a manufacturer to know that he has a good product sufficient for the needs of his locality, his state, or even his country; he must know what the foreign manufacturer of similar articles is doing, what are the points for or against his own goods, and how they can be adapted to the wants of all consumers, or he will awake to find his markets disappearing and his credit gone. Nations have grown large in the past twenty years, but not so rapidly as the world has grown small. Where a few years ago it was deemed international competition for the products of America to sell against those of England, Germany and France on the soil of these respective countries, and vice versa, it is now an incident, and competition means the clash of these goods with those of other nations for the trade of Africa, of India, and the Far East. As a consequence of this expansion of industry and reaching out for markets, successful competition means a thorough knowledge of all technical details, constant outlook for improved processes, economy in handling and transportation, and an appreciative knowledge of the wants, the languages, and the prejudices of the consumers.

The result of this growth of trade, and the responsibilities which it involves, implies clearly the great need of trained and expert service in every ramification of an intricate and complex commercial problem. Not only business relations, but the policies of nations are involved, for the diplomacy of the present age is more concerned with the control of markets than the acquisition of territory. It is the man of commerce who rules the world today and dictates the action of governments. The man of war is the servant, not the master, and is held for use only in remote contingencies. And, after all, what is the work of a government but the carrying on of business on a large scale? Read the messages of the presidents for years back, and they deal almost exclusively with the problems of commerce and industry—the money standard, currency, banking, tariff, interstate commerce, rebates, trusts, taxation, canals, irrigation, forestry, etc. The underlying principles are the same. What is true of export and foreign trade is equally true of domestic and retail trade, which are closely involved with each other, and a situation is at hand where all slack in production must be taken up and no leeway allowed for inefficiency in service, or waste in material and methods.

In the United States the commercial and industrial pursuits are now recognizing this necessity of a closer economy. The average American business man has succeeded in spite of his methods, and sometimes in spite of himself. This country has been so rich in its resources, so absolutely prodigal in its opportunities, that the necessity of conserving and closely articulating the processes which control the raw material, the product, and its disposition, has never been keenly felt. This is not to be wondered at. Our agricultural lands, rich with the accumulated fertility of countless ages have yielded so bounteously that all minor savings have been neglected; our forests, vast and seemingly illimitable, have furnished to unscientific and eager hands a wealth of material without regard to the awful waste; our mines have given up their obvious treasures to the first frenzied rush of seekers, and hold still in the earth that was trampled under foot, fortunes for the scientific worker; our transportation lines have been laid hurriedly and with a disregard for permanence and economy which is compelling their rebuilding and reorganization; our trades and industries have been affected by this same spirit and policy, and have almost unconsciously been carried on with waste, with extravagance, and with some criminal negligence; our professional and scholastic methods have not escaped the charge of superficiality and lack of true scientific spirit; in short, in every sphere of industry, permanence and scientific economy have been sacrificed to expedience and haste. Our country has presented the curious anomaly of men in every trade, business, and profession

pursuing their vocation only just so long as nothing more lucrative came to view. True, we have grown rich and powerful. We could not help it. Our natural resources can discount our methods and still make our enterprises wonderfully profitable. When the seeker of fortune pitches his camp by the light of the stars and wakes in the morning to find that he has slept upon a gold mine, it does not tend to economy in development or care in method; more than that, it brings discontent to every person who hears of it. The development of our country reads like a book of wonder-tales, which is undoubtedly the reason why many of our methods are as inexplicable. Nor is the end yet. We have barely made acquaintance with our possibilities; we have been in a hurry too great to cultivate them. Our population has increased in a generation from forty millions to eighty millions, and our resources are quite capable of supporting ten times that number. There are undiscovered possibilities of wealth residing in our fields, our forests, our mountains, and our seas, greater than any past development, but they will yield their returns only to scientific treatment and economic principles. This is the problem that now concerns our industrial world, and for the solution of which it rightly looks for help to the schools.

Before going further, let us limit the boundaries of this discussion. It has already been hinted at in the interrogations put at the beginning of the paper. The colleges and universities, the professional and technical schools of the United States are the equal of any in the world, and are doing their work in a satisfactory manner. Our lawyers, our doctors,—some of our teachers, those who have the proper training,—and in particular, our engineers, command the respect of the world, and are as advanced as the knowledge of our age permits. Our immediate problem lies with the training of those between the ages of twelve and twenty, and the efficient equipment of the non-commissioned officers in the great army of industry for their leadership of the rank and file.

It is permitted to profit by the experience of others, and what our natural riches have caused us to neglect, necessity has forced other nations to adopt. So well have their efforts succeeded that we find them dangerous in the competition in spite of their handicap. Notable, of course, are Germany and France, and in this brief survey of the efforts of these countries to improve the effective training of their youth, I shall draw at will from the excellent consular reports made to the Department of Commerce and Labor during the last two years, and from our own observation of the exhibits of these nations at Paris in 1900, and St. Louis in 1904.

At the close of the war of 1870, Germany's position in the commercial world was, like her political unity, at its beginning. It is not a country rich in natural resources, nor particularly favored for exchange; the people are not especially inventive; it

has enjoyed peace, but not security, and has been burdened with the most expensive standing army in the world. Yet within this period she has come to challenge England, France, and the United States in the very industries in which they are strongest. There are three reasons for this in Germany's case: the government, the people, and the schools. The former has never lost an opportunity to foster its industries and labor, hence a carefully constructed tariff, a state system of industrial insurance which combines state aid, compulsory thrift, and employer's liability; factory legislation which protects employes and does not hamper production; a closely articulated school system, and other minor details. The German people are devoted to systematized work. The employer is vigilant and active; they send young men away to learn, they bring instructors to the factory; they encourage skill and research, and support innumerable institutions for the people's welfare. The working classes, on their part, are exemplary in conduct, and as a rule content, notwithstanding evidences of social unrest which crop out at occasional elections of the Reichstag. The doctrine of do as little as you can and get as much as you can for it, has not met with a favorable response. An article in the London Times describes the remarkable success of a new novel entitled "Jorn Uhl." It is a story of simple peasant life, by a country pastor, and the moral is summed up by the old farm housekeeper as the peasants trudge home after hearing a sermon—"Well, I suppose we must go on working till the evening, and be as good and kind as we can." That this book—the very antithesis to everything in modern literature—should have taken the German public by storm is of no little significance in determining that great factor of industrial progress—the content of the workman. And here, by way of comparison, I can see no immediate prospect of hope in the United States. Contentment is a word not in the lexicon of American labor; and the unrest engendered by possible political preferment, and by the chances of sudden wealth; the discontent aroused by the accumulation of vast fortunes and the envy of successful speculations, preclude a growth of pride in long continuance in an occupation. For this condition there will come no relief till our country has become so thoroughly settled, and its resources so completely under control, that the unexpected ceases to be the rule. This fact will vex our growth for many years to come.

The third and predominant factor in German progress is the schools. The school system of Prussia, with its compulsory attendance laws, enforced to such an extent that in 1903, out of 5,754,000 children of school age only 548 were unaccounted for, is well known,—as are also the scope of the realschulen and gymnasias; we need to consider only the schools established for special training for industrial arts and commercial practice. Since Von

Liebig's example, nearly fifty years ago, of conducting a great laboratory for the training of practical chemists, from which sprang a small army of young chemists who have made applied chemistry the most vigorous and successful of Germany's industries, both the state and local authorities have been firmly wedded to the policy of maintaining advanced schools for scientific study in every phase of industry. To recur to the chemical illustration, it is estimated that over seven thousand chemists are working in municipal, private, or corporate laboratories, carrying on original research for small salaries and an interest in any discoveries of value they may make. As a result the country controls the lucrative trade in inorganic and carbon compounds. The careful analysis of soils and skillful manufacture of fertilizers to supply the lacking elements have practically reorganized the methods of agriculture. For example, the percentage of sugar in the sugar beet has thus been raised from $5\frac{1}{2}$ per cent to 13 per cent, and a moribund industry put on a paying basis. There is no need to multiply specific examples. Similarly, to quote from the report of Consul-General Mason: "In the iron and steel manufacture, and in the whole long, varied schedule of textile production, it is only the possession of a vast army of skilled chemists, metallurgists, designers, dyers, weavers, and spinners, recruited year by year from graduates of the universities and technical and industrial art schools, and backed by salesmen and merchants elaborately educated and trained for commercial work in foreign countries, that has enabled Germany practically to monopolize certain special forms of manufacture, and, despite limited natural resources, to conquer and maintain a place in the front rank of industrial nations."

Not all the larger institutes are state supported, but are more often maintained by the joint efforts of state, municipality and chambers of commerce. A fair type is the Zittau Technical Institute, established for the benefit of the textile industries of that part of Germany. Its purpose is to produce superintendents, managers, overseers, foremen, designers, etc., by means of practical and theoretical instruction. The courses of study cover one and a half or two years. The tuition is nominal, ranging from \$2.50 per year in the evening classes, to \$47.50 in the higher day classes. Drawing, arithmetic, bookkeeping, geography, and one foreign language, preferably English, are the chief subjects taught outside of the practice work of the trade. This school covers a higher field than the hundreds of continuation and technical schools with which Germany is dotted, and is comparable more directly with the Lowell Institute of Massachusetts, which aims to turn out foremen and superintendents for the textile industry.

The basis of Germany's great progress has included commercial schools as well as industrial. Their number has increased

enormously in the past few years, and those of you who were at the St. Louis exposition last year may recall the remarkable exhibit of these schools. They are, generally speaking, of three grades: the continuation school, the secondary school, and the school for higher instruction. The first named are intended for apprentices and boys who can spend a few hours per day at school; the course is usually planned for three years, and includes commercial calculations, geography, correspondence, bookkeeping, stenography, and two foreign languages. The municipal commercial high school at Cologne, founded in 1900, has a six-year course covering the ages of ten to sixteen, and adds to the above subjects, algebra, geometry, natural sciences, history, law, French for six years, and English for three. The higher institutions, of which the Academy of Social and Commercial Science, founded at Frankfort-on-the-Main, in 1901, is the foremost type, has a distinct purpose, and aims to provide instruction on commercial, economic and political matters to merchants, bank officials, consular officers in particular, secretaries of boards and chambers of commerce, etc. Its lecture courses contain every topic of commercial and national interest. Entrance to the school requires certain qualifications, and ample opportunity is given for a thorough understanding of the social and economic principles of the day. Seven more of these commercial universities are contemplated for the very near future.

So much time has been taken in describing the methods of the Germans, who have gone into the matter with their characteristic thoroughness, that but few words can be said of France, Belgium and other nations. The industrial and commercial education of France is the outcome of twenty years of statutory enactments following appeals from the chambers of commerce, based upon the decline of technical skill in French industries. The decree of 1892 put the *écoles pratiques de commerce et d'industrie* directly under the jurisdiction of the minister of commerce and industries, and they have been widely established and carefully fostered ever since. They aim to furnish clerks and workmen ready to take their places in the counting-room and workshop. And, I may say in passing, that an arrangement has been made with the trades unions of France whereby credit, sometimes full, is given on the period of apprenticeship. Some such arrangement will have to be made in this country, but at present it looks as though it would be a difficult task.

The primary schools of France, under the ministry of public instruction, continue as heretofore to give a certain amount of technical instruction as a preparation for apprenticeship. The training in all of these schools is practical and thorough, and some of the products on exhibition at Paris and St. Louis were not to be distinguished from the work of skilled labor.

In Belgium, to quote the words of the Directeur General of higher education, in a letter written to the speaker, "the administrative energy of the government in recent years has been turned to the practical realization of what is considered in Belgium the imperative law of modern pedagogy, *l'école de la vie*," which may be liberally translated as school training for the necessary work of life.

There is no need of multiplying foreign examples. The tendency and its causes are evident, the results are easily noted. We are chiefly concerned with the extent and the manner in which their experience may benefit us. In comparing the educational systems of France, Germany and other nations with that of the United States, one condition must always be in mind, and that is the maintenance under government supervision of a dual system of schools, parallel so far as the ages of the children are concerned, but one designed to lead to the trades and industries, and the other to the cultural professions and occupations. The former is free for all children, the latter requires tuition. The former is avowedly planned to give a superior training for the crafts and to perpetuate class distinctions and hereditary occupations; the latter is the continuation of the time-honored humanities adapted to modern theories. The primary schools of France, Belgium and Italy, and the *realschulen* of Germany are of the first class and carry the training of children from the ages of five and six to fourteen and fifteen, and dismiss them into the trades with considerable credit towards their term of apprenticeship. The secondary schools and the gymnasia of the same countries instruct children between five and sixteen, generally speaking, and prepare for the universities and technical schools.

This policy of one kind of training for the working classes and another for the professional and leisure classes is repugnant to American ideas, and totally at variance with the theory of our beginning and our development. It can never be introduced into our educational system so long as our public policy is based upon the glorious and true principle, contained in our great magna charta, of equal opportunities for all to advance in accordance with their ability and deserts. There can be no dissent from this principle, to be an American. Hence our educational policy, lest it might seem to waver an iota from the rigid letter of the principle, has prescribed the same training for all alike. The fault is not with the principle—but with ourselves in its application. It was never the intention of the fathers of our country to maintain that its citizens were equal in any respect but in their status before the laws of God and man. The natural law, which is the law of God if you will, of differentiation of types and species, cannot be set aside by any document, however formal; and the makers of the Declara-

tion of Independence would be more surprised than any one, could they know it had ever been construed otherwise.

But there are a few facts with which we sum up, all implied in the foregoing discussion, which bear so directly upon the situation as to be conclusive:

First, this country has grown so large and its needs are so varied that it is impracticable to train all children alike; second, we are in duty bound to afford an opportunity to the vast majority who live by manual labor to fit themselves as well as possible for their work; third, our commercial and industrial supremacy depends upon high efficiency in every part of its complex organism, and the schools must furnish the means; fourth, the changes in curriculum which are thus involved must leave to the pupil, or his parents, the absolute choice which preference may inspire, or limitations of fortune or lack of ability compel.

It is one thing to diagnose a condition, another to prescribe. Happily, our country is so large that in one part or another we may always find a trial under way from which we may derive information. The point is to force a thorough appreciation of the subject on public attention and cause all to do what one may be doing; to bring every municipality to do what one may be doing well. It does not seem advisable materially to disturb the eight-year elementary course. Its mind-informing and mind-developing foundations are a necessity for good citizenship, whatever vocation the pupil chooses to follow. In the seventh and eighth grades a special elective manual training course might be given, or more manual training introduced, which would not interfere with the cultural studies, and be of value not only for objective training, but for the process of selection.

But in the secondary school work, between the ages of fourteen and eighteen, that most dangerous period of life when self-supporting and self-respecting work is a necessity, the greater changes must come. These changes to be effective must include the systematic organization of a class of schools available for those who are at work, as well as for those who are preparing for work. Manual training high schools, and commercial high schools, are being established in many cities of the country, notably New York, Philadelphia, Chicago, St. Louis, and Kansas City. The work of the commercial high schools, if based upon the recommendations of the special committee from the Business Department of the National Educational Association, will undoubtedly meet our present wants, supplemented, as they are, by commercial departments in universities. It will at least do for a beginning. The manual training high schools as existing in many cities will not meet the demand made upon them by industrial conditions, nor can I see that they were designed to. They are usually for the purpose of fitting more completely for entrance to higher technical

schools, rather than for entrance to the trades and crafts, and so fail to meet the wants of the many. It seems imperative, therefore, to establish in every city and town of a size to warrant it, and in questions of size the school should have the benefit of the doubt, a municipal technical or trade school under control of the city authorities, or, if found advisable, under joint control of the municipality and the board of trade. The school should be fully equipped for practical work and an independent evening course maintained; tuition should be free, or only a nominal charge. In short, what is being done tentatively in a few cities, and often under private auspices, should be undertaken as a public obligation, not only in justice to the ninety and nine, but, if you please, as a solid business investment for the account of the nation.

I have not touched upon the great value to better citizenship which these schools would give. That is self-evident. The social fabric would benefit quite as much as the industrial. Nor have I anticipated the objections of those who will advise leaving well enough alone, and tell us that we are getting along very well now. It is a good plan to have your fuel ready before the call for extra steam is heard. The only point urged is one of judicious preparation for an inevitable demand, and the fact that it accords with our standards and ideals. The ideal of American citizenship is high, because based upon that highest appeal to action: equal opportunity for all. We do not expect all men to be leaders and guides; there must always be hewers of wood and drawers of water; but the state will have discharged its full obligations as the protector of society, only when it presents to all a training *within reach*, through which may be diffused a general knowledge and a respect for right, which will alike secure our land from open attack or the insidious undermining of vice.

EDUCATION AND THE STATE.

By P. L. CAMPBELL.

The most remarkable result of a century of free government is not found in the expansion of territory and enormous growth in wealth, of which we so frequently and so justly boast, but in the tremendous strides taken by democracy within the same period. How doubtful the fathers of the republic were of the extent to which the common people can be trusted is well shown by the safeguards which they threw around the election of the president of the United States and of the members of the senate. They were too newly come from aristocratic and monarchical institutions to accept fully in practice the inspiring theories of equality about which they so fluently wrote and declaimed. It was one

thing to proclaim to the world that all men are born free and equal, and quite another to place their lives and property subject to the command of a government wholly based on the unrestricted will of the people.

So electors were to be chosen who in their wisdom were to select a good man and true as chief executive; and the senators were to be the safe choice of that better part of the people who might be elected as legislators in the various states.

But democracy was not slow to assert itself in the selection of a president, practically dictating to the electors who their choice should be; and the irony of recent history has shown how wise was the aristocratic method of election of senators as compared with the democratic selection of the members of the house.

With the growth of enlightenment we have come to realize how glorious a thing freedom is, and how it may develop a citizenship that may more safely be trusted in the mass than any restricted body of temporarily constituted guardians, subject to the temptations of practically unrestricted power.

The organization of machine government in city, state, and nation called aloud for a remedy, and the great common people, grown conscious of their power and confident of its use, have steadily been taking over more and more of the real control into their own hands.

So everywhere we see the movement toward election of United States senators by vote of the people, nomination by direct primaries, initiative in legislation, chastened by the milder form of referendum when the laws made by representative bodies are not acceptable to their constituencies.

This tendency expresses a deep conviction as to the fairness and trustworthiness of the people as a whole. In our own state and a few sister states practically the ultimate steps, those of direct nomination and of direct legislation, have been taken, and we are today living under a form of government the most democratic in fact that the world has ever known.

The old machinery of legislation is retained, but the spirit of it is controlled by the certainty of a referendum if the laws do not conform to the will of the people. No refusal to grant legislation demanded by the people can be effective when there remains the easy redress of direct legislation by means of the initiative.

The government has become in fact a government of and by the people; it remains to be seen whether it shall prove one for the people, in the sense of being a sure guarantee of justice and a means for the promotion of prosperity and happiness.

It goes without saying that all will depend on the character of the people themselves. Given a body of just, generous, and capable men, and there is little need of law either to restrain or to

stimulate. Law is, after all, only a device of society to bolster up its least efficient members. A state composed wholly of good and enlightened citizens certainly would not be in danger of mismanaging its own affairs.

But, unfortunately, common experience teaches us that we cannot always depend on all our fellow citizens' being good and enlightened, and the measure of the danger in this government of ours of today is found in the proportion that may exist between the unenlightened and the enlightened, between the bad and the good. If education were ever in demand to insure safety and prosperity, it is today, when every vital interest of the community, and so of the individual, is placed directly in the hands of a bare majority of our fellow citizens.

And even a most insignificant minority may disturb existing conditions or delay progress by proposing new laws or calling in question those already passed. From the standpoint of the vital interests of the state, and of the individual within the state, there is no longer any negligible part of our population. Our individual safety and happiness depend on the enlightenment and trustworthiness of all.

To commit ourselves to such a form of government is one of the most magnificent declarations ever made of high faith in humanity and in the immeasurable possibilities of education. If we are to make good this faith, we must apply ourselves as never before to the task of turning the light into the dark places and of building strength and goodness into the characters of our fellow men. Out of our danger may come our safety, if we but realize the supreme importance of the work to be done. It is the paying attention to things that is always the surest safeguard, and there is nothing to make us pay attention like an imminent risk.

But the argument for education by the state is by no means solely on the ground of averting danger. If it were so, many who are callous to risk would be unmoved, and the state might swing along to destruction without their apathy's ever being overcome. But in a commercial age, the argument of gain is not apt to fall on dull ears anywhere.

We are growing to realize more and more every day the enormous money value of education, and to understand that the chief asset of the state is the trained intellect that it contains. What were all our unlimited resources in mine, in timber, in agriculture, were it not for the brains that convert them into wealth? They were here before the coming of the white man, but to the ignorant savage they were locked storehouses, and he dwelt in poverty and distress in the midst of potential plenty.

And now, since production has become more a matter of brain than of brawn, since the forces of nature have been har-

nessed to the machinery of manufacture, and keen intelligence and high skill are required for the performance of the duties of even common labor, the market value of education is recognized as never before.

Listen to the statistics furnished by a most reliable authority, Mr. James M. Dodge, of the American Society of Mechanical Engineers, as to the comparative money value of the trained and the untrained:

The boy who leaves school at fourteen and goes directly to manual labor, maximum wages, \$500 per year, maximum reached at twenty-two years; the apprentice boy, serving full time at his trade after leaving the public school, maximum wages, \$750 per year, maximum reached at twenty-four years; trade school boy, who takes his training of three years in the technical school after leaving the public school, maximum wages, \$1,250 per year, with maximum reached at thirty years of age; and last, the college-trained engineer, completing a full four years' professional course after leaving the high school, average salary at thirty years of age, \$2,000, with maximum earning unfixed, growing steadily in ability and usefulness through the greater part of his life.

Between the unskilled manual laborer and the highly trained engineer there is a difference in earning capacity of \$1,500 per year, which means a difference in productive ability of that amount as a minimum; for in the long run, wages must measure the minimum productive power of the employe, if the employer is long to be able to continue in business. The employe must give back at least as much as he receives, or his employer fails.

Education, then, has enabled a citizen to add to the wealth of the state at least \$1,500 per year more than he could have added as an uneducated laborer. The average working life of such a man is not less than twenty years, probably much more, and yet in twenty years he will have added \$30,000 to the state's wealth, its taxable wealth, mind you, in return for the investment of some seven or eight hundred dollars, at the highest estimate, which the state has put into his training. Discount the amount by half, and yet we find such a percentage of profit as is found in few other investments.

We have the actual demonstration of results in the enormous wealth which this country of ours has accumulated, counted now in units of billions instead of millions. Why have our engineers taken rank above those of all other countries, and why have our manufacturers invaded the markets of the world? Why has our country become the strongest money power on earth? We have been told by those who have visited us to find an answer to these very questions, that the explanation is largely found in the excellence and extent of our educational system. Without a high level

of intelligence and skill, who dreams that we could ever have reached our present commanding position, or could hope to retain it? The best investment, in mere cash returns, our states have ever made is found in the appropriations made for public education.

I pass over all the higher values in civilization and culture, for these are readily granted, and dwell for the present on the enormous economic gains which have come to the state through education.

With returns on our past investments beyond our wildest dreams, why should we hesitate to invest, even as a purely business venture, still larger sums in education? We boast of our great expenditures for public schools in comparison with the expenditures of other nations; but how inadequate they are, after all, in comparison with the importance of the work to be done. For our entire public educational system we spend approximately three dollars per capita of our entire population, and for the secondary and collegiate part of it we are spending about 35 cents per capita.

We have 16,000,000 children in our public schools, but only 1,500,000 of them get beyond the fifth grade, and about 600,000 of them enter the high school. Only one-half of 1 per cent of the total number ever enter college. And yet we frequently hear dire prophecies of evil results to come from over-education.

The day is not far distant when we will blush, rather, for the present inadequacy of our system. We shall then look on the high school course as being the standard preparation for the common labor of life. Even today the stolid laborer of thirty years ago, whose only asset was his muscle, has been largely replaced in factory and mine by the keen-witted high school boy, whose trained intelligence is worth many times the brute strength of his predecessor.

When the nation has grasped more fully the great truth that education prepares for work, rather than for the avoidance of it—raising it above the plane of drudgery and glorifying it with interest and intelligence—then shall we begin to educate in earnest, and place no limit to the extent and amount of training offered to those who will avail themselves of it. The work of education will become indeed the chief concern of the state, and the best and wisest will give to it most liberally not only of their means, but of their time and thought as well.

And what will be the nature of this more fully developed educational system? Merely the realization of the old ideals toward which wise teachers have been striving for generations—the development of the child to the full possibilities of his nature, physical, intellectual, spiritual. We shall not educate him merely that he shall make money, though he should be able to make money enough for self-support after he is educated; we shall not

even educate him that he shall become a good citizen, though he should be a better citizen through being educated; but we shall try to make him a fully developed man, knowing that to this high estate all other blessings are added. He is educated because God has endowed him with a soul, and that soul is the most valuable product of all the eternities of creation. His line has survived through the myriad accidents of countless generations. He is here, though millions of other lines have become extinct; here, marking the highest point of mundane development, and containing the hope of the future of mankind. Shall we not see to it that every opportunity is offered for "a sound mind in a sound body"—that the soul shall become a noble one, both for itself and for the future generations that shall be conditioned by it?

Development of body, mind and soul—this is the perfect work that lies before the larger education of the future. Physical training and manual training for strength of body and dexterity of hand; observation, inference, and application for the intellect; love of beauty, truth, and goodness, with faith, and hope, and charity, and reverence for the soul—this is to be the broad programme of our public education.

And the means? Well, the means will be the largest-souled, broadest-minded, best-trained men and women of the state, with the amplest equipment for their work that money can supply. The school buildings of both country and town will be well placed in ample grounds, substantial and artistic in construction, sanitary in surroundings and plan.

Much of the work will be done out of doors, with real nature work as a center, and many of the ills of mature life will be averted by the healthy, happy life of the days spent in school.

But I would not place the emphasis on surroundings and equipment, important as they are, while the great fact remains that it is the teacher who makes the school, whether in grammar grades or university. Though millions be spent on our schools and there be no real men and women to put life and soul into them, the money fails largely of its purpose.

The most serious duty to be performed by any school board is that of making a wise selection of a teacher. First of all, there should be soundness of nature—good stuff, well seasoned, free from knots and gnarls. The call to teach should be there, the outcome of an ardent and sympathetic nature, with abundance of knowledge to impart and great aptness in imparting it.

Skill should have been acquired through long study of the science of education and abundance of practice in the art of imparting it under efficient supervision.

Since clearly enough in the work of education the teacher is the factor of first importance, it follows logically that no pains should be spared to induce the best men and women to enter

the profession of teaching, and that the conditions should all be made such as to get the largest returns from their labors. Let the salaries be made such as to provide for comfortable living, free from the worry of the wolf, never far from the door. Let old age be made secure by an assured income on retirement from active service, so that the teacher's best energies may go into his work. This work, when the best is given unreservedly, precludes the possibility of accumulating money, and if we would have it filled with the cheerfulness and contentment that assure the greatest efficiency, we must free it from the haunting spectre of a penniless old age.

Why should we not place the great army of peace on the same footing as the army that goes to war? The soldier is cared for when his days of activity are over; the teacher is of no less importance to the nation, nor do his duties and his compensation admit of greater savings for his old age.

Make, then, the life of the teacher safe and attractive, give to the profession of teaching such recognition as will make it more generally sought by the most capable men and women of our times, those largest of mind and largest of soul, and the most important step will have been taken toward the highest development of our educational system.

If the demand is great for excellence of ability in the primary and secondary periods of education, how imperative it becomes in the college and university. For here, as has ever been the case and ever will be, lie the forces which shape the destiny of the nation.

More and more the university is coming into intimate, vital relationship with every form of activity within the state. It must know intimately the needs of the state if it is to train to the best advantage the men and women who are to be most instrumental in supplying these needs.

Note the broad and sound programme of university activities as outlined over a century ago by Thomas Jefferson, founder of the University of Virginia, the first to see clearly the place of the university supported by the state as the logical completion of a system of universal education on which a democracy might be safely based. This is his conception of the functions of a university for the state:

"1. To form the statesmen, legislators, and judges on whom public prosperity and happiness are to depend.

"2. To expound the principles and structure of government, the laws which regulate the intercourse of nations, those formed principally for our own government, in a sound spirit of legislation, which, banishing all unnecessary restraint on individuality, shall leave us free to do whatever does not violate the rights of another.

even educate him that he shall become a good citizen, though he should be a better citizen through being educated; but we shall try to make him a fully developed man, knowing that to this high estate all other blessings are added. He is educated because God has endowed him with a soul, and that soul is the most valuable product of all the eternities of creation. His line has survived through the myriad accidents of countless generations. He is here, though millions of other lines have become extinct; here, marking the highest point of mundane development, and containing the hope of the future of mankind. Shall we not see to it that every opportunity is offered for "a sound mind in a sound body"—that the soul shall become a noble one, both for itself and for the future generations that shall be conditioned by it?

Development of body, mind and soul—this is the perfect work that lies before the larger education of the future. Physical training and manual training for strength of body and dexterity of hand; observation, inference, and application for the intellect; love of beauty, truth, and goodness, with faith, and hope, and charity, and reverence for the soul—this is to be the broad programme of our public education.

And the means? Well, the means will be the largest-souled, broadest-minded, best-trained men and women of the state, with the amplest equipment for their work that money can supply. The school buildings of both country and town will be well placed in ample grounds, substantial and artistic in construction, sanitary in surroundings and plan.

Much of the work will be done out of doors, with real nature work as a center, and many of the ills of mature life will be averted by the healthy, happy life of the days spent in school.

But I would not place the emphasis on surroundings and equipment, important as they are, while the great fact remains that it is the teacher who makes the school, whether in grammar grades or university. Though millions be spent on our schools and there be no real men and women to put life and soul into them, the money fails largely of its purpose.

The most serious duty to be performed by any school board is that of making a wise selection of a teacher. First of all, there should be soundness of nature—good stuff, well seasoned, free from knots and gnarls. The call to teach should be there, the outcome of an ardent and sympathetic nature, with abundance of knowledge to impart and great aptness in imparting it.

Skill should have been acquired through long study of the science of education and abundance of practice in the art of imparting it under efficient supervision.

Since clearly enough in the work of education the teacher is the factor of first importance, it follows logically that no pains should be spared to induce the best men and women to enter

the profession of teaching, and that the conditions should all be made such as to get the largest returns from their labors. Let the salaries be made such as to provide for comfortable living, free from the worry of the wolf, never far from the door. Let old age be made secure by an assured income on retirement from active service, so that the teacher's best energies may go into his work. This work, when the best is given unreservedly, precludes the possibility of accumulating money, and if we would have it filled with the cheerfulness and contentment that assure the greatest efficiency, we must free it from the haunting spectre of a penniless old age.

Why should we not place the great army of peace on the same footing as the army that goes to war? The soldier is cared for when his days of activity are over; the teacher is of no less importance to the nation, nor do his duties and his compensation admit of greater savings for his old age.

Make, then, the life of the teacher safe and attractive, give to the profession of teaching such recognition as will make it more generally sought by the most capable men and women of our times, those largest of mind and largest of soul, and the most important step will have been taken toward the highest development of our educational system.

If the demand is great for excellence of ability in the primary and secondary periods of education, how imperative it becomes in the college and university. For here, as has ever been the case and ever will be, lie the forces which shape the destiny of the nation.

More and more the university is coming into intimate, vital relationship with every form of activity within the state. It must know intimately the needs of the state if it is to train to the best advantage the men and women who are to be most instrumental in supplying these needs.

Note the broad and sound programme of university activities as outlined over a century ago by Thomas Jefferson, founder of the University of Virginia, the first to see clearly the place of the university supported by the state as the logical completion of a system of universal education on which a democracy might be safely based. This is his conception of the functions of a university for the state:

"1. To form the statesmen, legislators, and judges on whom public prosperity and happiness are to depend.

"2. To expound the principles and structure of government the laws which regulate the intercourse of nations, those formed principally for our own government, in a sound spirit of legislation, which, banishing all unnecessary restraint on individual rights, shall leave us free to do whatever does not violate the rights of another.

"3. To harmonize and promote the interests of agriculture, manufactures, and commerce, and by well informed views of political economy to give a free scope to the public industry.

"4. To develop the reasoning faculty of our youth, to enlarge their minds, cultivate their morals, and instill into them the principles of virtue and order.

"5. To enlighten them with mathematical and physical sciences; which advance the arts and minister to the health, the subsistence, and the comforts of human life.

"6. And generally to form them to habits of reflection and correct action, rendering them examples of virtue to others, and of happiness within themselves."

The theoretical and the practical; the idea and the act; to know law and obey it; to grasp the theory of political economy, and to apply it for the nation's betterment. The university, as Jefferson plans it, is to train the practical idealist. The student is to simplify life by learning things in their relationships; to rise to a comprehension of principles, and thus give an orderly arrangement to the seemingly endless complexities of everyday experience. Thinking gains in simplicity as it rises.

So the university must remain idealistic, in the sense that the plan must be comprehended before action is undertaken—and the highest plan is that of life and thought itself. But the plan is only the beginning; it exists for the sake of its own accomplishment. Therefore the university must give intimate knowledge of the conditions under which the accomplishment takes place, in other words, of the world as it is; and also it must give great skill in actual performance, so that the largest practical results may be most easily and economically attained. Library and laboratory, seminary and field work, philosophy and engineering, all these go to the making up of the modern university of the state. In it should be found the opportunity for every citizen of the state to secure the highest training in the vocation to which he is called—training broadly generalized into literature, philosophy, and art, science and engineering, and the old-time learned professions.

But the state is no longer content to stop with a system of education limited to its regularly organized schools. A broader democracy needs a broader education, and if each citizen is to participate directly in the function of legislation, it becomes an urgent necessity that his education be continued through life. He must be kept constantly aware of changing conditions, he must be fitted to meet each new problem as it arises, he must grow a wiser and safer legislator with each passing year. And so the state is extending its activities by means of the great public library movement of recent times, with its highly organized methods of stimulating and directing the reading of the great body

of the common people. Only second in importance now is the public library to the public school, and it seems a question how long it may remain in second place.

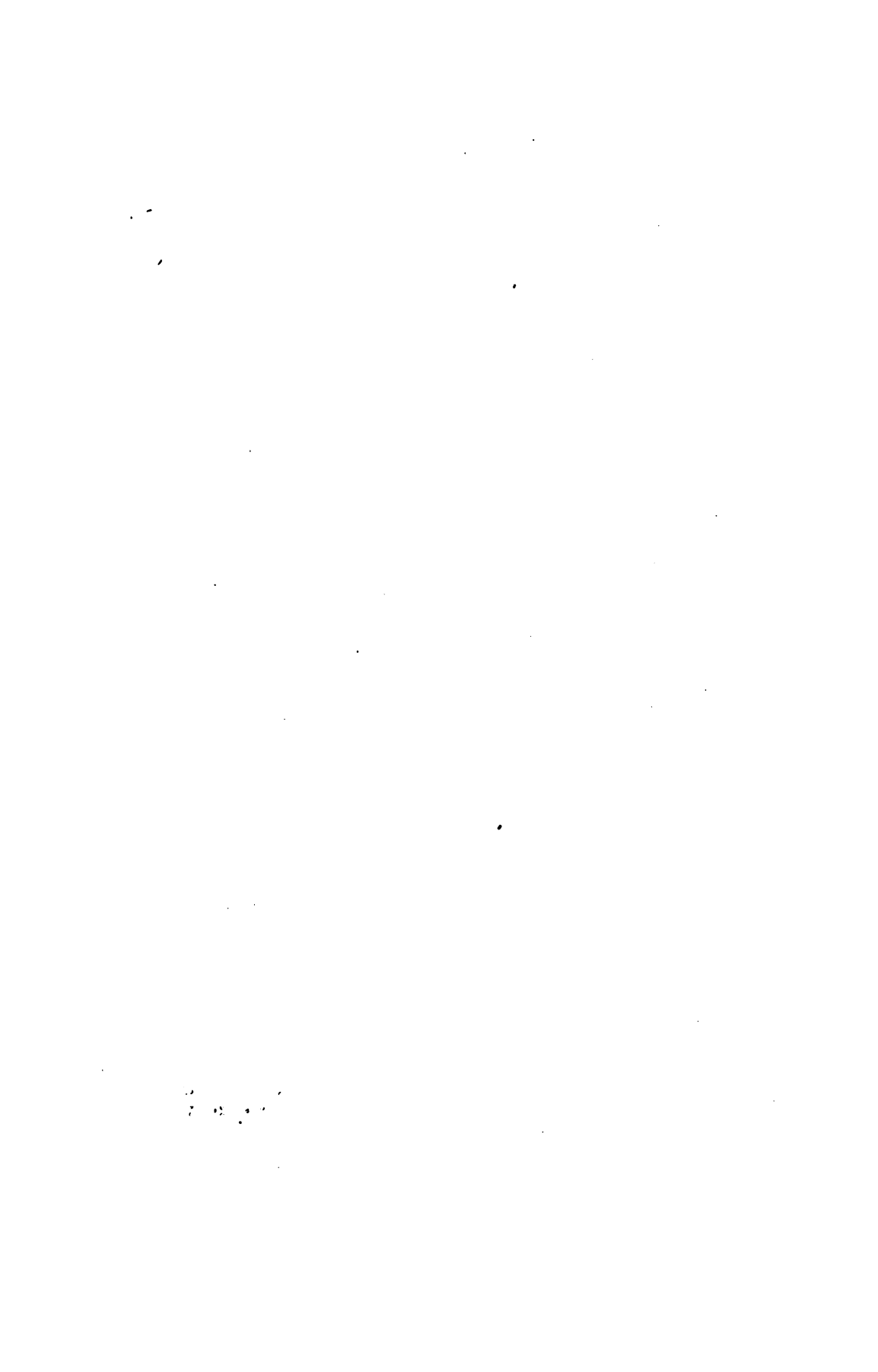
There is nothing more remarkable in the history of popular education than the marvelously rapid growth of public libraries.

Within the twelve years between 1891 and 1903 the number of public libraries supported by taxation increased from 879 to 3,148, and the rate of increase grows greater each year. In the United States today we have in all libraries of 1,000 volumes and over the tremendous aggregate of more than 54,000,000 books, of which by far the greater part are directly accessible to the general public.

But in reality we are only in the beginning of the library movement. When every town and village has its public library, when a system of distribution throughout the country districts is made possible through a parcels post, when great central state libraries place at the command of every citizen, at telephone call if you will, the detailed and accurate statement of the experience of the whole world in every department of human activity—then will the higher education of the people, the education that follows school, be carried on broadly and effectively through the medium of the wisely organized and skillfully directed reading of books.

In conclusion, what is the ideal of government toward which we are making with this vast system of public education? In answer I would say, one in which, through general enlightenment and development of sound character, it may be possible to have a minimum of external restraint and a maximum of internal sense of obligation. This would be the highest type of free government, one in which each citizen knows the right and willingly does it. Toward such real freedom it is the high privilege of America to lead the way.

1107



Index

	PAGES
Program	7 to 8
Convocation Address	9 to 23
<i>William T. Harris.</i>	
Unsettled Questions of the Schools ..	24 to 40
<i>Andrew S. Draper.</i>	
The Relation of the Pacific Coast to Education in the Orient	41 to 50
<i>Benjamin Ide Wheeler.</i>	
Education in a Democracy	50 to 61
<i>F. Louis Soldan.</i>	
School Extension and Adult Education	62 to 75
<i>H. M. Leipziger.</i>	
Manual Training.....	75 to 77
<i>H. M. Leipziger.</i>	
The Problem of the Rural School.....	77 to 91
<i>J. H. Ackerman.</i>	
Higher Agricultural Education	91 to 101
<i>E. A. Bryan.</i>	
Education in Reference to Our Future Industrial and Commercial Development.....	102 to 112
<i>Howard J. Rogers.</i>	
Education and the State.....	113 to 121
<i>P. L. Campbell.</i>	

1109 33

Mod

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84